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AERODYNAMIC CHARACTERISTICS OF THE AFFTC NOSEBOOM
INSTRUMENTATION UNIT VOLUME 2(U) AIR FORCE FLIGHT TEST
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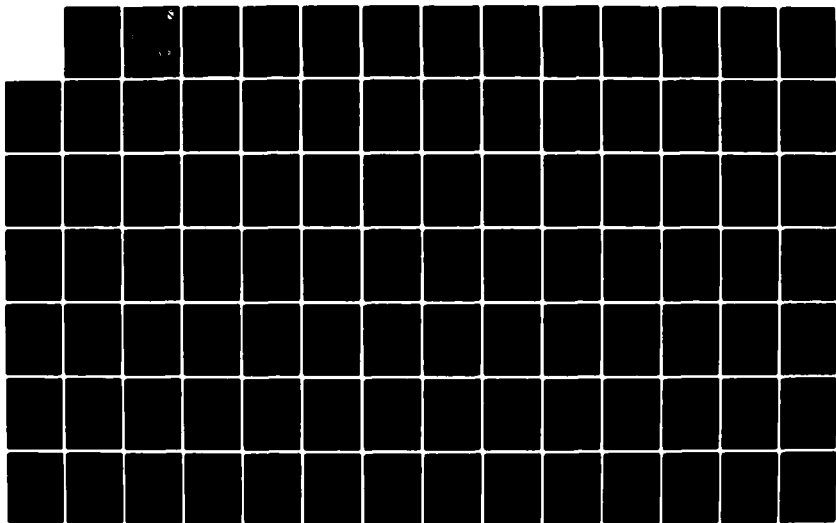
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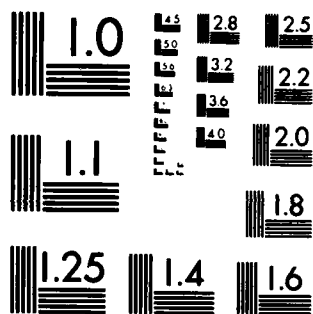
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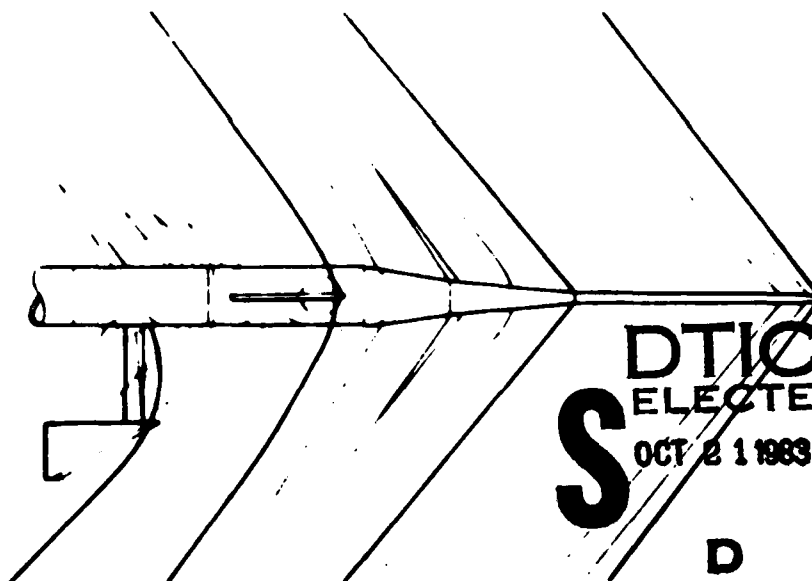
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**AERODYNAMIC CHARACTERISTICS OF THE
AFFTC NOSEBOOM INSTRUMENTATION UNIT
VOLUME II OF II**

**KENNETH RAWLINGS III
MARK T. KORSMO**

MARCH 1982



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**AIR FORCE FLIGHT TEST CENTER
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This Technical Information Memorandum (AFFTC-TIM-81-2), Aerodynamic Characteristics of the AFFTC Noseboom Instrumentation Unit, Volume II of II, was submitted under Job Order Number SC6342 by the Commander, 6520 Test Group, Edwards AFB, California 93523.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This technical information memorandum presents the results and data from wind tunnel calibration of the flow-angle sensing portion of the Air Force Flight Test Center noseboom instrumentation unit. Analysis of the data from the NASA/Ames Research Center 11- by 11-foot and 9- by 7-foot wind tunnels is presented along with fairings resulting from the analysis. The data fairings, which present error in sensed angle of attack and sensed angle of sideslip as a function of Mach number, angle of attack, and angle of sideslip, are			

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20. summarized and compared extensively with the data. Computer software incorporating the data fairings in a concise form for data reduction routines and the software documentation are included. Volume I of this memorandum includes discussion of the analysis, data fairings, fairing-to-data comparisons, software and software documentation. Volume II is a run schedule and complete listing of the NASA/ARC original wind tunnel data.

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PREFACE

Wind tunnel calibration of the Air Force Flight Test Center (AFFTC) noseboom instrumentation unit (NBIU) was undertaken as part of a joint USAF/NASA research program called the Transonic Aircraft Technology (TACT) program. The wind tunnel test was planned and supported by numerous individuals from NASA/Dryden Flight Research Center (NASA/DFRC) and NASA/Ames Research Center (NASA/ARC) as well as AFFTC. The test was conducted by personnel from NASA/ARC who obtained the data and applied normal wind tunnel corrections. Since the purpose of the calibration was TACT project support, no formal report was written, and data was transferred informally to project personnel from AFFTC and NASA/DFRC. The data was transmitted as "preliminary and subject to further checks" and there is no intent by the authors or any of the involved organizations to upgrade the status of this data. The digital data is summarized in this memorandum as a means of preserving and disseminating the data for those whose knowledge of the test hardware, test facility, and use of this type of data will allow meaningful interpretation and use.

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LIST OF COMPUTER SYMBOLS AND ABBREVIATIONS

<u>ITEM</u>	<u>DESCRIPTION SYMBOLS</u>	<u>UNITS</u>
ALPHA	NBIU true angle of attack	deg
ALFAV	NBIU indicated angle of attack	deg
BETA	NBIU true angle of sideslip	deg
BETAV	NBIU indicated angle of sideslip	deg
CONF	configuration number	- -
	1, 11- x 11-foot wind tunnel, roll angle 0°	
	2, 11- x 11-foot wind tunnel, roll angle 180°	
	3, 11- x 11-foot wind tunnel, roll angle 90°	
	4, 11- x 11-foot wind tunnel, roll angle 270°	
	5, 11- x 11-foot wind tunnel, roll angle 0° (model/sting alignment recomputed)	
	7, 9- x 7-foot wind tunnel, roll angle 90°	
	8, 9- x 7-foot wind tunnel, roll angle 270°	
	9, 9- x 7-foot wind tunnel, roll angle 180°	
	10, 9- x 7-foot wind tunnel, roll angle 0°	
DALPHA	angle of attack error, DALPHA=ALPHA-ALFAV	deg
DBETA	angle of sideslip error, DBETA=BETA-BETAV	deg
MREF	reference Mach number	- -
M8	freestream Mach number based on wind tunnel calibration	- -
NAL	nominal NBIU angle of attack (added by AFFTC for quick reference)	deg
NBT	nominal NBIU angle of sideslip (added by AFFTC for quick reference)	deg
PHI	roll angle code	- -
	0, roll angle 0°	
	1, roll angle 180°	
	10, roll angle 90°	
	11, roll angle 170°	

LIST OF COMPUTER SYMBOLS AND ABBREVIATIONS (CONCLUDED)

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNITS</u>
PT8	freestream total pressure	IN HG
RECORD	data processing record number	- -
REYN	unit Reynold number $\times 10^{-6}$	/ft
RUN	run number	- -
TT8F	freestream total temperature	deg F

ABBREVIATIONS

AFFTC	Air Force Flight Test Center	- -
NASA/ARC	NASA/Ames Research Center	- -
NASA/DFRC	NASA/Dryden Flight Research Center	- -
NBIU	noseboom instrumentation unit	- -
TACT	Transonic Aircraft Technology	- -

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DISCUSSION

The Air Force Flight Test Center (AFFTC) noseboom instrumentation unit (NBIU) was tested in the NASA/Ames Research Center (NASA/ARC) Unitary facility as part of the Transonic Aircraft Technology (TACT) program. The test was conducted by NASA/ARC, Aeronautics Division, Experimental Investigation Branch as test number 11/97-731 between February 25, 1973, and March 12, 1973. Notes, installation photographs, and schlieren photographs of the test were transmitted shortly after the test to AFFTC and NASA/Dryden Flight Research Center (NASA/DFRC). Digital data containing final corrections were transmitted to AFFTC and subsequently to NASA/DFRC on two reels of magnetic tape numbered 11-731-PH1-R1 (Copy 1) and 97-731-PH1-R1 (Copy 1) on or about May 1, 1973. A letter report containing the notation and data identification, key to configurations, key to installation photographs, and run schedule completed data transmittal on October 29, 1973. The results of this test are "preliminary and subject to further check" as specified by NASA/ARC. Data consistency and comparisons with flight acquired data, however, have given us confidence that all but a few runs were valid for the purposes of this memorandum.

Volume II of this report is a summary of the NASA/ARC data used in analysis and interpretation of the wind tunnel test and development of the NBIU calibration for angle of attack and angle of sideslip. Table 1 is the run schedule for the 11- x 11-foot wind tunnel tests and Table 2 is the run schedule for the 9- x 7-foot wind tunnel tests. These tables concisely present the data which was obtained and available for analysis. Figure 1 is a listing of the digital data from the 11- x 11-foot wind tunnel tests and figure 2 is a listing from the 9- x 7-foot wind tunnel tests. The scope of the data in both figures has been reduced to include only those parameters dealing with test conditions, angle of attack, and angle of sideslip; pressure and pitot-static data is not presented. Although the scope of data has been reduced and the data reformatted, the data values presented are those received from NASA/ARC. The data in figures 1 and 2 has also been reordered to facilitate data retrieval. The data was ordered in ascending Mach number with each Mach grouping ordered in ascending run number.

A thorough check of the flow angularity corrections applied to the data was made prior to development of the NBIU calibration. A discussion of the flow angularity correction and the check plots for this set of data are presented in Appendix A of Volume II.

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TABLE 1
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
1	0.60	E	0	1	21.63
2	0.60	0	H	1	21.63
3	0.80	E	0	1	14.90
4	0.80	0	H	1	14.90
5	0.90	E	0	1	13.06
6	0.90	0	H	1	13.06
7	0.95	E	0	1	12.04
8	0.95	0	H	1	12.04
9	1.05	E	0	1	17.96
10	1.05	0	H	1	17.96
11	1.10	E	0	1	18.98
12	1.10	0	H	1	18.98
13	1.20	E	0	1	21.63
14	1.20	0	H	1	21.63
15	0.95	E	0	1	12.04
16	1.30	E	0	1	24.90
17	1.30	0	-2,0,2,4	1	24.90
18	1.30	E	0	1	15.51
19	1.30	0	H	1	24.90
20	1.40	E	0	1	28.57
21	1.40	E	0	1	28.57
22	0.90	E	0	1	38.98
23	0.90	E	0	1	23.27
24	0.40	E	0	1	23.06
25	0.40	0	H	1	23.06
26	0.60	E	0	2	21.63
27	0.60	0	-H	2	21.63
28	0.80	E	0	2	14.90
29	0.80	0	-H	2	14.90
30	0.90	E	0	2	13.06
31	0.90	0	-H	2	13.06
32	0.95	E	0	2	12.04
33	0.95	0	-H	2	12.04
34	1.05	E	0	2	17.96
35	1.05	0	-H	2	17.96
36	1.10	E	0	2	18.98

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

TABLE 1 (CONTINUED)
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
37	1.10	0	-H	2	18.98
38	1.20	E	0	2	21.63
39	1.20	0	-H	2	21.63
40	1.30	E	0	2	24.90
41	1.30	0	-H	2	24.90
42	1.40	E	0	2	28.57
43	1.30	E	0	2	15.51
44	0.90	E	0	2	38.98
45	0.40	E	0	2	23.06
46	0.40	0	-H	2	23.06
47	0.60	E	0	2	21.63
48	0.60	0	H	3	21.63
49	1.30	0	H	3	15.51
50	1.30	0	H	3	24.90
51	1.20	0	H	3	21.63
52	1.10	0	H	3	18.98
53	1.05	0	H	3	17.96
54	0.95	0	H	3	12.04
55	0.90	0	H	3	13.06
56	0.80	0	H	3	14.90
57	0.60	0	H	3	21.63
58	0.40	0	H	3	23.06
59	0.60	0	-H	4	21.63
60	0.80	0	-H	4	14.90
61	1.30	0	-H	4	24.90
62	1.30	0	-H	4	15.51
63	1.20	0	-H	4	21.63
64	1.10	0	-H	4	18.98
65	1.05	0	-H	4	17.96
66	0.95	0	-H	4	12.04
67	0.90	0	-H	4	13.06
68	0.40	0	-H	4	23.06
69	0.60	0	-H	4	21.63
70	0.60	0	-H	4	21.63
71	0.60	0	-10	4	21.63
72	1.30	A, 18, 20, 22, 25	0	5	15.51

A: ALPHA = -3, -2, -1, 0, 1, 2, 4, 6, 8, 10, 12, 14, 16

E: ALPHA = -3, -2, -1, 0, 1, 2, 4

H: BETA = -2, 0, 2, 4, 6, 8, 10, 12

TABLE 1 (CONTINUED)
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
73	1.20	A,18,20,22,25	0	5	21.63
74	1.10	A,18,20,22,25	0	5	18.98
75	1.05	A,18,20,22,25	0	5	17.96
76	0.95	A,18,20,22,25	0	5	12.04
77	0.90	A,18,20,22,25	0	5	13.06
78	0.80	A,18,20,22,25	0	5	14.90
79	0.60	A,18,20,22,25	0	5	21.63
80	0.40	A,18,20,22,25	0	5	23.06
81	0.90	E,4,5,6	0	5	13.06
82	0.90	0	H	5	13.06
83	0.90	1	H	5	13.06
84	0.90	2	H	5	13.06
85	0.90	4	H	5	13.06
86	0.90	6	H	5	13.06
87	0.90	-1	H	5	13.06
88	0.90	-2	H	5	13.06
89	0.90	8	H	5	13.06
90	0.90	10	H	5	13.06
91	0.90	12	H	5	13.06
92	0.90	14	H	5	13.06
93	0.90	16	H	5	13.06
94	0.90	18	H	5	13.06
95	0.90	20	H	5	13.06
96	0.90	22	H	5	13.06
97	0.90	-2,0,2,4	0	5	13.06
98	0.95	-2,0,2,4	0	5	12.04
99	0.95	22	H	5	12.04
100	0.95	20	H	5	12.04
101	0.95	18	H	5	12.04
102	0.95	16	H	5	12.04
103	0.95	14	H	5	12.04
104	0.95	12	H	5	12.04
105	0.95	10	H	5	12.04
106	0.95	8	H	5	12.04
107	0.95	-2,0,2,4	0	5	12.04
108	0.95	6	H	5	12.04

A: ALPHA = -3,-2,-1,0,1,2,4,6,8,10,12,14,16

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

TABLE 1 (CONTINUED)
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
109	0.95	4	H	5	12.04
110	0.95	2	H	5	12.04
111	0.95	1	H	5	12.04
112	0.95	0	H	5	12.04
113	0.95	-1	H	5	12.04
114	0.95	-2	H	5	12.04
115	0.95	-2,0,2,4	0	5	12.04
116	0.80	-2,0,2,4	0	5	14.90
117	0.80	22	H	5	14.90
118	0.80	20	H	5	14.90
119	0.80	18	H	5	14.90
120	0.80	16	H	5	14.90
121	0.80	14	H	5	14.90
122	0.80	12	H	5	14.90
123	0.80	10	H	5	14.90
124	0.80	8	H	5	14.90
125	0.80	6	H	5	14.90
126	0.80	4	H	5	14.90
127	0.80	2	H	5	14.90
128	0.80	1	H	5	14.90
129	0.80	0	H	5	14.90
130	0.80	-1	H	5	14.90
131	0.80	-2	H	5	14.90
132	0.80	-2,0,2,4	0	5	14.90
133	0.60	-2,0,2,4	0	5	21.63
134	0.60	22	H	5	21.63
135	0.60	20	H	5	21.63
136	0.60	18	H	5	21.63
137	0.60	16	H	5	21.63
138	0.60	14	H	5	21.63
139	0.60	12	H	5	21.63
140	0.60	10	H	5	21.63
141	0.60	8	H	5	21.63
142	0.60	6	H	5	21.63
143	0.60	4	H	5	21.63
144	0.60	2	H	5	21.63

H: BETA = -2,0,2,4,6,8,10,12

TABLE 1 (CONTINUED)
11- X 11-00T WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
145	0.60	1	H	5	21.63
146	0.60	0	H	5	21.63
147	0.60	-1	H	5	21.63
148	0.60	-2	H	5	21.63
149	0.60	-2,0,2,4	0	5	21.63
150	0.40	-2,0,2,4	0	5	23.06
151	0.40	4	H	5	23.06
152	0.40	22	H	5	23.06
153	0.40	20	H	5	23.06
154	0.40	18	H	5	23.06
155	0.40	16	H	5	23.06
156	0.40	14	H	5	23.06
157	0.40	12	H	5	23.06
158	0.40	10	H	5	23.06
159	0.40	8	H	5	23.06
160	0.40	6	H	5	23.06
161	0.40	2	H	5	23.06
162	0.40	1	H	5	23.06
163	0.40	0	H	5	23.06
164	0.40	-1	H	5	23.06
165	0.40	-2	H	5	23.06
166	0.40	-2,0,2,4	0	5	23.06
167	K	0	0	5	20.00
168	1.05	-2,0,2,4	0	5	17.96
169	1.05	22	H	5	17.96
170	1.05	20	H	5	17.96
171	1.05	18	H	5	17.96
172	1.05	16	H	5	17.96
173	1.05	14	H	5	17.96
174	1.05	12	H	5	17.96
175	1.05	10	H	5	17.96
176	1.05	8	H	5	17.96
177	1.05	6	H	5	17.96
178	1.05	4	H	5	17.96
179	1.05	2	H	5	17.96
180	1.05	1	H	5	17.96

H: BETA = -2,0,2,4,6,8,10,12

K: MACH = 0.40,0.50,0.60,0.70,0.80,0.85,0.875,0.90,0.92,0.93,
PT8 = 17.2,16.9,15.7,14.4,13.2,12.5,12.10,11.8,11.6,11.4,

MACH = 0.94,0.95,0.96,0.97,0.98,0.99,1.00,1.01,1.02,1.03,
PT8 = 11.3,11.2,11.1,11.0,10.8,10.7,10.6,10.5,10.3,10.2,

MACH = 1.05,1.07,1.10,1.15,1.20,1.25,1.30
PT8 = 10.0,9.70,9.40,8.80,8.24,7.72,7.22

TABLE 1 (CONTINUED)
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PTd
181	1.05	0	H	5	17.96
182	1.05	-1	H	5	17.96
183	1.05	-2	H	5	17.96
184	1.05	-2,0,2,4	0	5	17.96
185	1.30	-2,0,2,4	0	5	24.90
186	1.30	22	H	5	24.90
187	1.30	20	H	5	24.90
188	1.30	18	H	5	24.90
189	1.30	16	H	5	24.90
190	1.30	14	H	5	24.90
191	1.30	12	H	5	24.90
192	1.30	10	H	5	24.90
193	1.30	8	H	5	24.90
194	1.30	6	H	5	24.90
195	1.30	4	H	5	24.90
196	1.30	2	H	5	24.90
197	1.30	1	H	5	24.90
198	1.30	0	H	5	24.90
199	1.30	-1	H	5	24.90
200	1.30	-2	H	5	24.90
201	1.30	-2,0,2,4	0	5	24.90
202	1.30	E,6,8,10,12	0	5	57.14
203	1.20	-2,0,2,4	0	5	21.63
204	1.20	22	H	5	21.63
205	1.20	20	H	5	21.63
206	1.20	18	H	5	21.63
207	1.20	16	H	5	21.63
208	1.20	14	H	5	21.63
209	1.20	12	H	5	21.63
210	1.20	10	H	5	21.63
211	1.20	8	H	5	21.63
212	1.20	6	H	5	21.63
213	1.20	4	H	5	21.63
214	1.20	2	H	5	21.63
215	1.20	1	H	5	21.63
216	1.20	0	H	5	21.63

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

TABLE 1 (CONCLUDED)
11- X 11-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
217	1.20	-1	H	5	21.63
218	1.20	-2	H	5	21.63
219	1.20	-2,0,2,4	O	5	21.63
220	1.10	-2,0,2,4	O	5	18.98
221	1.10	22	H	5	18.98
222	1.10	20	H	5	18.98
223	1.10	18	H	5	18.98
224	1.10	16	H	5	18.98
225	1.10	14	H	5	18.98
226	1.10	12	H	5	18.98
227	1.10	10	H	5	18.98
228	1.10	8	H	5	18.98
229	1.10	6	H	5	18.98
230	1.10	4	H	5	18.98
231	1.10	2	H	5	18.98
232	1.10	1	H	5	18.98
233	1.10	0	H	5	18.98
234	1.10	-1	H	5	18.98
235	1.10	-2	H	5	18.98
236	1.10	-2,0,2,4	O	5	18.98
237	1.40	E,6,8,10	O	5	28.57
238	1.30	E,6,8,10	O	5	15.51
239	0.90	E,6,8,10	O	5	38.98
240	0.90	E,6,8,10	O	5	23.27
241	0.95	0	H	5	12.04
242	0.80	0	H	5	14.90
243	0.80	8	H	5	14.90
244	0.80	6	H	5	14.90
245	0.80	4	H	5	14.90
246	0.80	2	H	5	14.90
247	0.80	1	H	5	14.90
248	0.80	-1	H	5	14.90
249	0.80	-2	H	5	14.90
250	0.80	-2,0,2,4	O	5	14.90
251	0.95	8	H	5	12.04
252	0.40	8	H	5	23.06

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

TABLE 2
9- X 7-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
301	1.55	.1	-4,H	7	30.00
302	1.89	.1	-4,H	7	36.90
303	2.07	.6	-4,H	7	39.65
304	2.28	.6	-4,H	7	42.00
305	2.56	.4	-4,H	7	41.10
306	1.55	-.2	4,-H	8	30.00
307	1.89	-.3	4,-H	8	36.90
308	2.08	-.7	4,-H	8	39.65
309	2.28	-.8	4,-H	8	42.00
310	2.56	-.2	4,-H	8	41.10
311	L	L	.1	8	37.00
312	2.56	.1	-.3	9	24.45
313	2.56	.1	-.3	9	24.45
314	2.56	.1	-.3	9	24.45
315	2.56	.1	-.3	9	24.45
316	2.56	E	-.2	9	23.20
317	1.55	E	.2	9	30.00
318	1.89	E	.3	9	36.90
319	1.89	0	-H	9	36.90
320	1.55	-.2	-H	9	30.00
321	2.08	E	.7	9	39.65
322	2.08	-.2	-H	9	39.65
323	2.28	E	.8	9	42.00
324	2.28	-.1	-H	9	42.00
325	2.56	E	-.2	9	41.10
326	2.56	-.1	-H	9	41.10
327	2.56	.1	-.2	9	41.10
328	2.56	.1	-.2	9	41.10
329	1.73	E	.1	9	29.00
330	1.55	A	0	10	30.00
331	1.55	0	H	10	30.00
332	1.89	A	-.1	10	36.90
333	1.89	0	H	10	36.90
334	2.08	A	-.5	10	39.65
335	2.08	0	H	10	39.65
336	2.28	A	-.6	10	42.00

A: ALPHA = -3,-2,-1,0,1,2,4,6,8,10,12,14,16

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

L: MACH = 1.98,1.98,1.98,1.98,2.08
ALPHA = -.5, 1.5, 3.6, 5.8, -.7

TABLE 2 (CONTINUED)
9- X 7-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
337	2.28	0	H	10	42.00
338	2.56	A	.4	10	41.10
339	2.56	0	H	10	41.10
340	2.39	E,6,8,10	.1	10	39.90
341	1.73	E,6,8,10	.1	10	29.00
342	T	-.2	-.2	10	29.00
343	1.55	E	0	10	30.00
344	1.55	16	H	10	30.00
345	1.55	14	H	10	30.00
346	1.55	12	H	10	30.00
347	1.55	10	H	10	30.00
348	1.55	8	H	10	30.00
349	1.55	6	H	10	30.00
350	1.55	4	H	10	30.00
351	1.55	2	H	10	30.00
352	1.55	1	H	10	30.00
353	1.55	0	H	10	30.00
354	1.55	-1	H	10	30.00
355	1.55	-2	H	10	30.00
356	1.55	E	0	10	30.00
357	1.89	E	-.1	10	36.90
358	1.89	16	H	10	36.90
359	1.89	14	H	10	36.90
360	1.89	12	H	10	36.90
361	1.89	10	H	10	36.90
362	1.89	8	H	10	36.90
363	1.89	6	H	10	36.90
364	1.89	4	H	10	36.90
365	1.89	2	H	10	36.90
366	1.89	1	H	10	36.90
367	1.89	0	H	10	36.90
368	1.89	-1	H	10	36.90
369	1.89	-2	H	10	36.90
370	1.89	E	-.1	10	36.90
371	2.08	E	-.5	10	39.65
372	2.08	16	H	10	39.65

A: ALPHA = -3,-2,-1,0,1,2,4,6,8,10,12,14,16

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

T: MACH = 1.55,1.73,1.77,1.81,1.85,1.86,1.87,1.88,1.89,1.94,
1.98,2.08,2.28,2.39,2.56

TABLE 2 (CONCLUDED)
9- X 7-FOOT WIND TUNNEL RUN SCHEDULE

RUN	M8	ALPHA SCHEDULE	BETA SCHEDULE	CONF	PT8
373	2.08	14	H	10	39.65
374	2.08	12	H	10	39.65
375	2.08	10	H	10	39.65
376	2.08	8	H	10	39.65
377	2.08	6	H	10	39.65
378	2.08	4	H	10	39.65
379	2.08	2	H	10	39.65
380	2.08	1	H	10	39.65
381	2.08	0	H	10	39.65
382	2.08	-1	H	10	39.65
383	2.08	-2	H	10	39.65
384	2.08	E	-0.5	10	39.65
385	U	-0.2	-0.2	10	30.00
386	2.56	16	H	10	41.10
387	2.56	12	H	10	41.10
388	2.56	8	H	10	41.10
389	2.56	4	H	10	41.10
390	2.56	2	H	10	41.10
391	2.56	-1	H	10	41.10
392	2.56	-2	H	10	41.10
393	2.56	E	0.4	10	41.10
394	2.28	16	H	10	42.00
395	2.28	12	H	10	42.00
396	2.28	8	H	10	42.00
397	2.28	4	H	10	42.00
398	2.28	2	H	10	42.00
399	2.28	E	-0.6	10	42.00
400	W	-0.1	W	10	30.00
401	1.51	E,6,8,10,12	0	10	13.85

E: ALPHA = -3,-2,-1,0,1,2,4

H: BETA = -2,0,2,4,6,8,10,12

U: MACH = 1.56,1.63,1.67,1.72,1.77,1.80,1.85,1.86,1.87,1.88,
1.89,1.94,1.98,2.08,2.28,2.39,2.56

W: MACH = 1.73,1.73,1.89,1.89,1.98,1.98,2.08,2.08,2.18,2.18,
BETA = 0.1, 4.2, -0.1, 4.1, -0.3, 3.8, -0.6, 3.5, -0.6, 3.4,

MACH = 2.28,2.28

BETA = -0.6, 3.3

MREF RUN CONF PHI REYN TT8F
 .40 24 1 0 1.99 71.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.403	.13	0.00	.138	.15	.32	-.171	225	0	0
.404	4.15	4.18	-.028	.21	.35	-.138	226	4	0
.402	2.14	2.07	.069	.18	.34	-.158	227	2	0
.402	1.14	1.01	.124	.18	.34	-.158	228	1	0
.401	.14	0.00	.132	.15	.34	-.184	229	0	0
.403	-.86	-1.06	.200	.15	.32	-.166	230	-1	0
.401	-1.86	-2.10	.235	.15	.33	-.179	231	-2	0
.400	-2.88	-3.14	.261	.15	.26	-.113	232	-3	0
.401	.13	-.02	.157	.15	.37	-.215	233	0	0

MREF RUN CONF PHI REYN TT8F
 .40 25 1 0 2.00 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.402	.10	-.03	.132	-1.87	-1.73	-.139	234	0	-2
.404	.13	-.03	.161	.15	.35	-.201	235	0	0
.401	.08	-.12	.194	2.13	2.38	-.248	236	0	2
.401	.02	.01	.005	4.14	4.48	-.332	237	0	4
.402	-.04	.04	-.075	6.16	6.70	-.535	238	0	6
.402	-.08	-.02	-.058	8.18	8.83	-.648	239	0	8
.402	-.13	-.12	-.004	10.20	10.85	-.651	240	0	10
.402	-.15	-.07	-.076	11.14	11.84	-.699	241	0	11
.402	.13	-.06	.189	.16	.37	-.213	242	0	0

MREF RUN CONF PHI REYN TT8F
 .40 45 2 1 1.97 68.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.395	-.13	-.27	.143	.07	.58	-.504	442	0	0
.400	-3.14	-3.32	.180	.03	.48	-.452	443	-3	0
.398	-2.14	-2.36	.220	.05	.55	-.506	444	-2	0
.401	-1.13	-1.32	.188	.05	.56	-.532	445	-1	0
.403	-.13	-.27	.136	.08	.62	-.546	446	0	0
.403	.87	.78	.085	.08	.58	-.504	447	1	0
.401	1.87	1.84	.037	.08	.55	-.476	448	2	0
.399	2.89	2.88	.002	.08	.56	-.487	449	3	0
.399	-.13	-.25	.117	.08	.61	-.529	450	0	0

MREF RUN CONF PHI REYN TT8F
 .40 46 2 1 2.01 65.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	-.10	-.20	.107	2.11	2.56	-.454	451	0	2
.400	-.13	-.25	.117	.07	.58	-.507	452	0	0
.400	-.08	-.11	.031	-1.91	-1.43	-.475	453	0	-2
.400	-.02	-.14	.116	-3.92	-3.53	-.385	454	0	-4
.400	.03	-.11	.141	-5.94	-5.57	-.370	455	0	-6
.399	.08	.02	.059	-7.95	-7.66	-.295	456	0	-8
.399	.12	.15	-.025	-9.96	-9.70	-.267	457	0	-10
.399	.14	.12	.017	-10.81	-10.65	-.162	458	0	-11
.401	-.13	-.23	.095	.08	.58	-.497	459	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA

MREF RUN CONF PHI REYN TT8F
.40 58 3 10 2.02 62.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	.07	-.11	.176	.13	.39	-.255	564	0	0
.400	.02	-.05	.067	12.25	12.95	-.696	565	0	12
.400	.12	-.06	.180	10.20	10.90	-.707	566	0	10
.397	-.01	-.07	.066	8.16	8.76	-.598	567	0	8
.396	0.00	-.07	.076	6.15	6.62	-.478	568	0	6
.398	0.00	-.04	.045	6.15	6.64	-.495	569	0	6
.400	.01	-.08	.085	4.14	4.50	-.359	570	0	4
.399	.04	-.09	.130	2.13	2.44	-.316	571	0	2
.399	.07	-.09	.153	.13	.38	-.251	572	0	0
.398	.07	-.10	.162	-1.87	-1.70	-.169	573	0	-2

MREF RUN CONF PHI REYN TT8F
.40 68 4 11 2.01 64.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	.08	-.35	.422	-.13	.02	-.149	665	0	0
.398	.13	-.20	.330	-12.26	-12.57	.317	666	0	-12
.401	.02	-.21	.225	-10.21	-10.47	.269	667	0	-10
.402	.14	-.20	.343	-8.16	-8.30	.139	668	0	-8
.400	.14	-.24	.375	-6.12	-6.19	.073	669	0	-6
.398	.14	-.27	.404	-4.14	-4.15	.002	670	0	-4
.398	.10	-.31	.413	-2.13	-2.05	-.079	671	0	-2
.399	.08	-.34	.413	-.13	.04	-.176	672	0	0
.399	.08	-.32	.398	1.87	2.09	-.215	673	0	2

MREF RUN CONF PHI REYN TT8F
.40 80 5 0 2.03 60.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	24.85	26.09	-1.236	.15	.13	.021	857	25	0
.402	22.21	23.39	-1.180	.15	.19	-.045	858	22	0
.398	20.26	21.28	-1.024	.15	.28	-.135	859	20	0
.399	18.28	19.18	-.895	.16	.30	-.138	860	18	0
.401	16.26	17.03	-.771	.16	.32	-.162	861	16	0
.401	14.27	14.87	-.598	.16	.31	-.142	862	14	0
.401	12.26	12.76	-.498	.15	.29	-.145	863	12	0
.400	10.20	10.65	-.452	.03	.32	-.282	864	10	0
.399	8.16	8.47	-.313	.16	.34	-.181	865	8	0
.400	6.15	6.34	-.189	.15	.33	-.180	866	6	0
.401	4.15	4.19	-.043	.15	.37	-.213	867	4	0
.403	2.14	2.11	.027	.12	.37	-.256	868	2	0
.404	1.14	1.05	.095	.12	.36	-.244	869	1	0
.403	.13	.03	.106	.09	.37	-.274	870	0	0
.403	-.87	-1.04	.167	.09	.37	-.280	871	-1	0
.401	-1.87	-2.09	.223	.09	.36	-.270	872	-2	0
.402	-2.88	-3.16	.276	.09	.30	-.210	873	-3	0
.401	.13	0.00	.130	.09	.35	-.255	874	0	0

FIGURE 13 SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .40 150 5 0 2.01 61.9

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.398	4.15	4.17	-.027	.16	.38	-.228	1496	4	0
.399	2.14	2.08	.057	.12	.36	-.235	1497	2	0
.400	.14	0.00	.132	.10	.38	-.284	1498	0	0
.398	-1.87	-2.08	.209	.10	.35	-.257	1499	- 2	0
.399	.13	-.02	.150	.10	.38	-.284	1500	0	0

MREF RUN CONF PHI REYN TT8F
 .40 151 5 0 2.04 57.8

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	4.11	4.13	-.027	-1.87	-1.79	-.083	1580	4	- 2
.399	4.15	4.20	-.051	.16	.33	-.178	1581	4	0
.398	4.11	4.07	.038	2.09	2.36	-.268	1582	4	2
.398	4.07	4.20	-.128	4.07	4.43	-.359	1583	4	4
.399	4.04	4.27	-.231	6.06	6.55	-.486	1584	4	6
.399	3.99	4.18	-.196	8.08	8.84	-.769	1585	4	8
.399	3.93	4.07	-.144	10.09	10.91	-.814	1586	4	10
.399	3.87	4.23	-.355	12.11	13.04	-.932	1587	4	12
.400	4.15	4.17	-.020	.15	.36	-.205	1588	4	0

MREF RUN CONF PHI REYN TT8F
 .40 152 5 0 2.02 61.1

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.398	22.21	23.28	-1.072	-1.89	-1.95	.058	1501	22	- 2
.399	22.21	23.25	-1.039	.15	.16	-.015	1502	22	0
.399	22.18	23.13	-.951	2.15	2.32	-.176	1503	22	2
.399	22.10	23.17	-1.070	4.16	4.64	-.483	1504	22	4
.398	22.03	23.23	-1.194	6.18	7.12	-.935	1505	22	6
.399	21.96	23.12	-1.164	8.17	9.70	-1.533	1506	22	8
.398	21.94	23.06	-1.128	8.73	10.46	-1.726	1507	22	9

MREF RUN CONF PHI REYN TT8F
 .40 153 5 0 2.02 60.7

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.398	20.20	21.14	-.938	-1.88	-1.90	.026	1508	20	- 2
.398	20.26	21.19	-.925	.15	.26	-.117	1509	20	0
.399	20.17	21.03	-.861	2.14	2.37	-.223	1510	20	2
.399	20.10	21.03	-.935	4.14	4.57	-.430	1511	20	4
.399	20.03	21.19	-1.161	6.15	6.87	-.722	1512	20	6
.399	19.95	21.12	-1.168	8.16	9.45	-1.284	1513	20	8
.399	19.88	20.94	-1.067	10.17	11.90	-1.723	1514	20	10
.398	19.84	20.88	-1.031	11.01	12.77	-1.760	1515	20	11
.399	20.26	21.21	-.941	.15	.28	-.133	1516	20	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .40 154 5 0 2.03 60.6

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	18.24	19.05	-.813	-1.90	-1.94	.047	1517	18	- 2
.399	18.28	19.04	-.764	.16	.30	-.140	1518	18	0
.398	18.16	18.91	-.749	2.17	2.41	-.245	1519	18	2
.399	18.10	18.96	-.861	4.15	4.51	-.361	1520	18	4
.398	18.03	19.07	-1.036	6.16	6.79	-.637	1521	18	6
.400	17.95	19.01	-1.060	8.18	9.28	-1.099	1522	18	8
.400	17.87	18.90	-1.022	10.18	11.63	-1.455	1523	18	10
.399	17.79	18.92	-1.129	12.19	13.95	-1.756	1524	18	12
.400	18.28	19.07	-.787	.16	.32	-.154	1525	18	0

MREF RUN CONF PHI REYN TT8F
 .40 155 5 0 2.03 60.7

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	16.21	16.91	-.694	-1.91	-1.96	.048	1526	16	- 2
.400	16.26	16.92	-.658	.16	.30	-.138	1527	16	0
.400	16.20	16.82	-.624	2.18	2.43	-.258	1528	16	2
.400	16.10	16.77	-.673	4.16	4.56	-.397	1529	16	4
.399	16.00	16.84	-.839	6.15	6.80	-.647	1530	16	6
.399	15.93	16.80	-.872	8.16	9.17	-1.013	1531	16	8
.399	15.86	16.69	-.835	10.17	11.43	-1.260	1532	16	10
.399	15.79	16.90	-1.110	12.18	13.77	-1.584	1533	16	12
.399	16.26	16.95	-.695	.16	.32	-.156	1534	16	0

MREF RUN CONF PHI REYN TT8F
 .40 156 5 0 2.02 59.6

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.397	14.17	14.75	-.577	-1.90	-1.94	.037	1535	14	- 2
.398	14.27	14.81	-.541	.16	.29	-.123	1536	14	0
.398	14.17	14.62	-.449	2.18	2.46	-.280	1537	14	2
.399	14.08	14.63	-.551	4.16	4.58	-.424	1538	14	4
.398	14.00	14.70	-.697	6.15	6.80	-.641	1539	14	6
.399	13.93	14.65	-.720	8.16	9.15	-.989	1540	14	8
.400	13.85	14.56	-.711	10.17	11.31	-1.143	1541	14	10
.399	13.78	14.72	-.944	12.17	13.54	-1.365	1542	14	12
.399	14.27	14.83	-.563	.17	.33	-.167	1543	14	0

MREF RUN CONF PHI REYN TT8F
 .40 157 5 0 2.03 59.0

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	12.17	12.62	-.447	-1.91	-1.91	.001	1544	12	- 2
.399	12.26	12.71	-.452	.15	.28	-.132	1545	12	0
.399	12.10	12.41	-.306	2.17	2.41	-.241	1546	12	2
.399	12.04	12.46	-.433	4.17	4.57	-.394	1547	12	4
.399	12.00	12.57	-.573	6.19	6.81	-.619	1548	12	6
.398	11.93	12.54	-.603	8.17	9.09	-.921	1549	12	8
.399	11.87	12.40	-.532	10.17	11.23	-1.062	1550	12	10
.398	11.81	12.56	-.748	12.16	13.38	-1.223	1551	12	12
.399	12.26	12.73	-.477	.15	.32	-.169	1552	12	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.40 158 5 0 2.02 58.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.397	10.14	10.46	-.326	-2.02	-2.01	-.014	1553	10	- 2
.397	10.15	10.46	-.311	.03	.20	-.165	1554	10	0
.398	10.11	10.34	-.232	2.04	2.30	-.260	1555	10	2
.399	10.05	10.39	-.334	4.03	4.43	-.394	1556	10	4
.400	10.00	10.49	-.494	6.04	6.62	-.576	1557	10	6
.399	9.93	10.36	-.422	8.03	8.94	-.909	1558	10	8
.400	9.87	10.25	-.379	10.02	11.00	-.977	1559	10	10
.400	9.80	10.40	-.601	12.01	13.16	-1.149	1560	10	12
.398	10.15	10.47	-.318	.03	.27	-.243	1561	10	0

MREF RUN CONF PHI REYN TT8F
.40 159 5 0 2.04 57.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	8.15	8.44	-.291	-1.78	-1.72	-.064	1562	8	- 2
.399	8.16	8.44	-.280	.16	.32	-.159	1563	8	0
.394	8.17	8.39	-.221	2.04	2.27	-.235	1564	8	2
.393	8.08	8.38	-.301	4.04	4.42	-.372	1565	8	4
.397	7.99	8.44	-.445	6.06	6.63	-.565	1566	8	6
.398	7.93	8.36	-.437	8.05	8.87	-.824	1567	8	8
.397	7.86	8.28	-.422	10.03	10.96	-.933	1568	8	10
.397	7.80	8.29	-.491	12.02	13.10	-1.078	1569	8	12
.397	8.16	8.44	-.275	.17	.33	-.169	1570	8	0

MREF RUN CONF PHI REYN TT8F
.40 160 5 0 2.04 57.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.398	6.13	6.31	-.185	-1.85	-1.76	-.087	1571	6	- 2
.399	6.15	6.33	-.179	.15	.31	-.152	1572	6	0
.398	6.18	6.27	-.095	2.08	2.32	-.237	1573	6	2
.398	6.09	6.30	-.205	4.06	4.39	-.336	1574	6	4
.398	6.02	6.37	-.358	6.05	6.58	-.534	1575	6	6
.398	5.97	6.25	-.284	8.05	8.86	-.807	1576	6	8
.398	5.92	6.13	-.217	10.06	10.86	-.802	1577	6	10
.398	5.87	6.25	-.384	12.07	13.03	-.966	1578	6	12
.399	6.15	6.33	-.182	.15	.33	-.181	1579	6	0

MREF RUN CONF PHI REYN TT8F
.40 161 5 0 2.05 56.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	2.10	2.06	.034	-1.87	-1.76	-.111	1589	2	- 2
.400	2.13	2.08	.050	.12	.37	-.252	1590	2	0
.400	2.12	1.99	.125	2.06	2.40	-.332	1591	2	2
.400	2.04	2.07	-.032	4.06	4.45	-.390	1592	2	4
.400	1.97	2.10	-.128	6.08	6.70	-.619	1593	2	6
.400	1.93	2.02	-.095	8.09	8.87	-.782	1594	2	8
.400	1.89	1.97	-.082	10.11	10.88	-.769	1595	2	10
.399	1.86	2.23	-.370	12.13	13.05	-.917	1596	2	12
.399	2.13	2.07	.060	.12	.38	-.257	1597	2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .40 162 5 0 2.05 56.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	1.11	1.03	.078	-1.88	-1.73	-.145	1598	1	- 2
.400	1.14	1.05	.088	.12	.36	-.243	1599	1	0
.400	1.09	.93	.164	2.07	2.41	-.337	1600	1	2
.400	1.03	1.04	-.006	4.06	4.49	-.431	1601	1	4
.400	.97	1.08	-.110	6.07	6.71	-.639	1602	1	6
.400	.93	1.03	-.103	8.09	8.87	-.778	1603	1	8
.400	.89	.96	-.074	10.11	10.85	-.740	1604	1	10
.399	.85	1.12	-.269	11.90	12.79	-.887	1605	1	12
.400	1.14	1.05	.089	.12	.37	-.248	1606	1	0

MREF RUN CONF PHI REYN TT8F
 .40 163 5 0 2.05 56.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.400	.10	-.01	.116	-1.94	-1.72	-.216	1607	0	- 2
.401	.14	.03	.109	.09	.38	-.288	1608	0	0
.401	.08	-.14	.221	2.06	2.42	-.355	1609	0	2
.400	.02	0.00	.027	4.09	4.50	-.419	1610	0	4
.400	-.03	.04	-.071	6.11	6.70	-.592	1611	0	6
.399	-.08	-.01	-.068	8.12	8.89	-.776	1612	0	8
.399	-.12	-.09	-.036	10.14	10.89	-.748	1613	0	10
.399	-.15	-.05	-.100	11.12	11.91	-.791	1614	0	11
.400	.14	-.02	.154	.10	.37	-.276	1615	0	0

MREF RUN CONF PHI REYN TT8F
 .40 164 5 0 2.05 56.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	-.91	-1.08	.165	-1.92	-1.76	-.160	1616	- 1	- 2
.400	-.86	-1.04	.180	.09	.37	-.280	1617	- 1	0
.399	-.94	-1.19	.257	2.09	2.41	-.319	1618	- 1	2
.399	-.99	-1.08	.086	4.10	4.49	-.395	1619	- 1	4
.400	-1.05	-1.03	-.021	6.12	6.67	-.547	1620	- 1	6
.399	-1.09	-1.16	.073	8.10	8.94	-.835	1621	- 1	8
.400	-1.12	-1.21	.085	10.02	10.80	-.785	1622	- 1	10
.400	-.86	-1.07	.202	.09	.41	-.321	1623	- 1	0

MREF RUN CONF PHI REYN TT8F
 .40 165 5 0 2.04 56.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.399	-1.90	-2.12	.218	-1.95	-1.77	-.174	1624	- 2	- 2
.399	-1.86	-2.11	.245	.10	.37	-.275	1625	- 2	0
.400	-1.93	-2.25	.313	2.07	2.40	-.329	1626	- 2	2
.399	-1.99	-2.13	.144	4.10	4.49	-.384	1627	- 2	4
.400	-2.03	-2.09	.060	6.15	6.70	-.551	1628	- 2	6
.399	-2.08	-2.18	.102	8.17	8.83	-.660	1629	- 2	8
.400	-2.09	-2.24	.150	8.93	9.63	-.694	1630	- 2	9
.399	-1.86	-2.11	.246	.09	.38	-.293	1631	- 2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .40 166 5 0 2.04 57.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.398	4.15	4.19	-.043	.15	.35	-.194	1632	4	0
.398	2.13	2.06	.069	.12	.37	-.250	1633	2	0
.399	.13	.02	.115	.09	.37	-.273	1634	0	0
.398	-1.87	-2.08	.213	.09	.33	-.237	1635	- 2	0
.398	.13	0.00	.129	.09	.36	-.267	1636	0	0

MREF RUN CONF PHI REYN TT8F
 .40 167 5 0 2.02 57.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.467	.13	-.01	.135	.06	.35	-.293	1637	0	0
.497	.12	-.04	.164	.04	.38	-.336	1638	0	0
.596	.11	0.00	.117	-.01	.38	-.382	1639	0	0
.694	.11	.02	.083	0.00	.32	-.325	1640	0	0
.795	.10	-.01	.108	0.00	.40	-.404	1641	0	0
.854	.10	.06	.041	-.06	.30	-.365	1642	0	0
.880	.11	.06	.044	-.09	.23	-.324	1643	0	0
.903	.11	.06	.047	-.11	.19	-.299	1644	0	0
.920	.09	.11	-.024	-.07	.25	-.317	1645	0	0
.933	.07	.16	-.083	-.04	.26	-.308	1646	0	0
.941	.06	.15	-.087	-.03	.29	-.312	1647	0	0
.953	.05	.12	-.061	-.01	.30	-.311	1648	0	0
.956	.05	.08	-.020	-.01	.31	-.312	1649	0	0
.967	.06	.05	.008	-.01	.30	-.303	1650	0	0
.985	.06	.05	.011	-.01	.27	-.279	1651	0	0
.994	.06	.05	.013	-.01	.27	-.278	1652	0	0
1.000	.06	.05	.009	-.01	.28	-.284	1653	0	0
1.008	.06	.06	.006	-.01	.27	-.274	1654	0	0
1.024	.07	.06	.009	-.01	.27	-.274	1655	0	0
1.031	.07	.06	.010	-.01	.26	-.265	1656	0	0
1.047	.07	.05	.017	-.01	.27	-.274	1657	0	0
1.074	.08	.07	.009	-.01	.26	-.265	1658	0	0
1.098	.08	.06	.022	-.01	.25	-.256	1659	0	0
1.149	.07	.04	.040	-.04	.27	-.307	1660	0	0
1.201	.07	.02	.051	-.07	.24	-.302	1661	0	0
1.247	.03	.01	.012	-.04	.25	-.283	1662	0	0
1.295	-.02	-.04	.020	-.01	.29	-.294	1663	0	0

MREF RUN CONF PHI REYN TT8F
 .60 1 1 0 2.56 71.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.600	.11	.03	.085	.06	.27	-.213	10	0	0
.599	4.13	4.25	-.118	.12	.32	-.202	11	4	0
.599	2.11	2.15	-.031	.09	.29	-.210	12	2	0
.598	1.11	1.11	.001	.08	.25	-.168	13	1	0
.598	.11	.08	.032	.06	.26	-.203	14	0	0
.597	-.89	-.99	.098	.06	.28	-.219	15	- 1	0
.598	-1.89	-2.04	.151	.06	.26	-.204	16	- 2	0
.599	-2.90	-3.08	.180	.06	.26	-.200	17	- 3	0
.601	.12	.05	.069	.06	.28	-.227	18	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.60 2 1 0 2.56 70.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	.11	.05	.059	-1.99	-1.81	-.175	19	0	- 2
.596	.11	.05	.059	.06	.28	-.227	20	0	0
.598	.05	-.06	.111	2.01	2.28	-.265	21	0	2
.600	-.01	-.01	.004	4.04	4.38	-.337	22	0	4
.596	-.06	.01	-.069	6.11	6.58	-.474	23	0	6
.598	-.10	-.07	-.031	8.17	8.81	-.642	24	0	8
.597	-.15	-.18	.031	10.23	10.83	-.599	25	0	10
.598	-.17	-.10	-.067	11.22	11.82	-.604	26	0	11
.598	.11	.04	.072	.06	.28	-.227	27	0	0

MREF RUN CONF PHI REYN TT8F
.60 26 2 1 2.63 60.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.600	-.11	-.24	.129	.18	.59	-.407	255	0	0
.597	-3.12	-3.31	.189	.13	.48	-.349	256	- 3	0
.597	-2.12	-2.31	.199	.15	.52	-.379	257	- 2	0
.598	-1.11	-1.27	.162	.15	.58	-.429	258	- 1	0
.598	-.11	-.20	.087	.18	.61	-.430	259	0	0
.598	.89	.83	.058	.18	.60	-.425	260	1	0
.597	1.89	1.91	-.016	.18	.58	-.398	261	2	0
.598	2.91	2.95	-.044	.18	.56	-.384	262	3	0
.598	-.10	-.19	.088	.18	.58	-.398	263	0	0

MREF RUN CONF PHI REYN TT8F
.60 27 2 1 2.61 61.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	-.11	-.17	.062	2.23	2.64	-.414	264	0	2
.598	-.11	-.19	.079	.18	.61	-.431	265	0	0
.597	-.06	-.06	.002	-1.79	-1.48	-.306	266	0	- 2
.603	.01	-.08	.084	-3.81	-3.61	-.194	267	0	- 4
.596	.06	-.08	.139	-5.88	-5.82	-.059	268	0	- 6
.601	.10	.01	.091	-7.93	-7.94	.012	269	0	- 8
.596	.14	.13	.013	-9.99	-10.01	.024	270	0	-10
.603	.16	.10	.059	-10.88	-10.96	.072	271	0	-11
.602	-.11	-.16	.048	.18	.56	-.384	272	0	0

MREF RUN CONF PHI REYN TT8F
.60 47 2 1 2.58 66.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	-.11	-.19	.080	.18	.58	-.397	460	0	0
.596	-3.12	-3.29	.176	.14	.46	-.324	461	- 3	0
.596	-2.12	-2.30	.179	.15	.52	-.368	462	- 2	0
.597	-1.12	-1.26	.138	.15	.55	-.400	463	- 1	0
.597	-.11	-.20	.084	.18	.61	-.427	464	0	0
.598	.88	.84	.049	.18	.62	-.437	465	1	0
.597	1.89	1.90	-.003	.18	.58	-.400	466	2	0
.597	2.90	2.95	-.053	.18	.56	-.379	467	3	0
.599	-.11	-.20	.089	.18	.60	-.418	468	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.60 48 3 10 2.59 64.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	.17	-.02	.190	.11	.38	-.271	473	0	0
.598	.12	-.02	.141	12.25	12.96	-.711	474	0	12
.599	.22	-.06	.279	10.19	10.87	-.679	475	0	10
.599	.10	-.06	.155	8.15	8.73	-.578	476	0	8
.600	.11	-.05	.153	6.13	6.62	-.491	477	0	6
.599	.11	-.05	.159	4.13	4.54	-.409	478	0	4
.599	.14	-.06	.201	2.11	2.42	-.309	479	0	2
.598	.17	-.01	.182	.11	.39	-.280	480	0	0
.598	.17	-.01	.177	-1.89	-1.70	-.193	481	0	-2

MREF RUN CONF PHI REYN TT8F
.60 57 3 10 2.58 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	.17	-.04	.205	.11	.39	-.278	555	0	0
.598	.12	-.01	.131	12.25	12.96	-.717	556	0	12
.596	.22	-.06	.281	10.19	10.84	-.650	557	0	10
.596	.09	-.05	.144	8.15	8.73	-.584	558	0	8
.596	.10	-.07	.173	6.13	6.62	-.490	559	0	6
.596	.11	-.06	.171	4.12	4.55	-.422	560	0	4
.596	.14	-.06	.199	2.12	2.42	-.302	561	0	2
.597	.17	-.03	.194	.11	.39	-.277	562	0	0
.597	.17	.02	.145	-1.89	-1.70	-.191	563	0	-2

MREF RUN CONF PHI REYN TT8F
.60 59 4 11 2.61 62.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.600	-.02	-.30	.279	-.11	.09	-.206	578	0	0
.601	.03	-.17	.205	-12.25	-12.59	.338	579	0	-12
.598	-.08	-.18	.101	-10.19	-10.47	.276	580	0	-10
.601	.04	-.17	.216	-8.15	-8.31	.157	581	0	-8
.600	.04	-.22	.252	-6.13	-6.18	.057	582	0	-6
.600	.04	-.21	.247	-4.12	-4.08	-.042	583	0	-4
.600	0.00	-.24	.241	-2.12	-1.97	-.148	584	0	-2
.599	-.02	-.28	.256	-.12	.11	-.228	585	0	0
.600	-.03	-.29	.268	1.89	2.13	-.238	586	0	2

MREF RUN CONF PHI REYN TT8F
.60 69 4 11 2.59 66.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.602	-.02	-.29	.267	-.11	.10	-.208	674	0	0
.599	.03	-.17	.196	-12.25	-12.59	.348	675	0	-12
.599	-.08	-.19	.105	-10.20	-10.45	.254	676	0	-10
.599	.04	-.18	.221	-8.15	-8.31	.162	677	0	-8
.600	.04	-.20	.234	-6.13	-6.18	.048	678	0	-6
.601	.04	-.22	.252	-4.13	-4.08	-.045	679	0	-4
.601	0.00	-.25	.255	-2.11	-1.98	-.135	680	0	-2
.600	-.02	-.29	.261	-.11	.09	-.202	681	0	0
.597	-.03	-.29	.265	1.89	2.14	-.247	682	0	2

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .60 70 4 11 2.58 67.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	-.02	-.30	.276	-.11	.07	-.185	683	0	0
.597	.03	-.15	.184	-12.25	-12.59	.336	684	0	-12
.599	-.08	-.17	.082	-10.19	-10.48	.287	685	0	-10
.600	.04	-.17	.211	-8.15	-8.31	.161	686	0	-8
.599	.04	-.20	.234	-6.13	-6.19	.053	687	0	-6
.600	.04	-.22	.252	-4.13	-4.09	-.038	688	0	-4
.600	0.00	-.23	.233	-2.12	-1.98	-.135	689	0	-2
.599	-.02	-.28	.256	-.10	.08	-.188	690	0	0
.600	-.03	-.29	.268	1.89	2.12	-.224	691	0	2

MREF RUN CONF PHI REYN TT8F
 .60 71 4 11 2.57 67.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	-.08	-.18	.097	-10.20	-10.46	.265	692	0	-10
.599	-.08	-.17	.087	-10.20	-10.46	.268	693	0	-10
.599	-.08	-.18	.096	-10.20	-10.44	.242	694	0	-10
.598	-.08	-.18	.096	-10.20	-10.45	.254	695	0	-10
.597	-.08	-.17	.093	-10.20	-10.48	.289	696	0	-10
.597	-.08	-.17	.092	-10.20	-10.45	.251	697	0	-10
.598	-.08	-.18	.102	-10.20	-10.48	.287	698	0	-10
.598	-.08	-.17	.092	-10.20	-10.43	.238	699	0	-10
.599	-.08	-.18	.097	-10.20	-10.48	.285	700	0	-10
.598	-.08	-.17	.083	-10.20	-10.47	.276	701	0	-10

MREF RUN CONF PHI REYN TT8F
 .60 79 5 0 2.58 67.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	24.88	26.17	-1.290	.05	0.00	.052	839	25	0
.598	22.23	23.49	-1.263	.05	.17	-.119	840	22	0
.602	20.27	21.39	-1.116	.05	.25	-.204	841	20	0
.597	18.28	19.30	-1.020	.06	.29	-.233	842	18	0
.604	16.25	17.18	-.923	.06	.32	-.261	843	16	0
.598	14.26	15.05	-.784	.06	.29	-.227	844	14	0
.599	12.25	12.94	-.689	.05	.32	-.272	845	12	0
.602	10.19	10.74	-.547	-.07	.31	-.379	846	10	0
.597	8.15	8.56	-.407	.06	.33	-.267	847	8	0
.598	6.13	6.43	-.295	.05	.33	-.275	848	6	0
.600	4.13	4.26	-.128	.05	.35	-.300	849	4	0
.600	2.12	2.18	-.059	.02	.36	-.338	850	2	0
.600	1.12	1.11	.004	.02	.36	-.340	851	1	0
.599	.12	.08	.031	-.01	.36	-.370	852	0	0
.600	-.89	-.98	.097	-.01	.34	-.349	853	-1	0
.601	-1.89	-2.04	.155	-.01	.31	-.316	854	-2	0
.600	-2.90	-3.11	.210	-.01	.32	-.325	855	-3	0
.600	.11	.07	.045	-.01	.36	-.370	856	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .60 133 5 0 2.60 63.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	4.13	4.19	-.065	.06	.33	-.269	1320	4	0
.596	2.12	2.08	.033	.02	.34	-.315	1321	2	0
.596	.11	.01	.100	0.00	.37	-.371	1322	0	0
.598	-1.89	-2.09	.204	-.01	.29	-.293	1323	-2	0
.598	.11	.02	.090	0.00	.34	-.342	1324	0	0

MREF RUN CONF PHI REYN TT8F
 .60 134 5 0 2.60 64.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	22.25	23.39	-1.138	-2.01	-2.12	.113	1325	22	-2
.598	22.22	23.34	-1.119	.05	.14	-.093	1326	22	0
.598	22.18	23.22	-1.038	2.03	2.34	-.306	1327	22	2
.597	22.10	23.26	-1.163	4.06	4.68	-.615	1328	22	4
.598	22.04	23.39	-1.350	6.13	7.11	-.975	1329	22	6
.598	21.96	23.23	-1.269	8.15	9.62	-1.472	1330	22	8
.600	21.94	23.24	-1.300	8.69	10.31	-1.614	1331	22	9
.599	22.22	23.35	-1.131	.05	.15	-.098	1332	22	0

MREF RUN CONF PHI REYN TT8F
 .60 135 5 0 2.60 64.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	20.24	21.27	-1.031	-2.00	-2.00	-.007	1333	20	-2
.598	20.27	21.30	-1.029	.05	.26	-.209	1334	20	0
.598	20.17	21.11	-.945	2.03	2.43	-.394	1335	20	2
.599	20.09	21.13	-1.037	4.05	4.70	-.650	1336	20	4
.596	20.03	21.27	-1.240	6.09	6.96	-.867	1337	20	6
.596	19.95	21.19	-1.240	8.15	9.43	-1.279	1338	20	8
.596	19.88	21.08	-1.203	10.21	11.88	-1.668	1339	20	10
.597	19.85	21.08	-1.230	11.08	12.84	-1.760	1340	20	11
.599	20.27	21.30	-1.029	.05	.27	-.224	1341	20	0

MREF RUN CONF PHI REYN TT8F
 .60 136 5 0 2.59 66.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	18.27	19.22	-.949	-2.02	-1.97	-.048	1342	18	-2
.599	18.28	19.17	-.892	.06	.28	-.216	1343	18	0
.598	18.16	19.03	-.874	2.06	2.44	-.387	1344	18	2
.597	18.09	19.03	-.944	4.06	4.63	-.568	1345	18	4
.597	18.03	19.09	-1.065	6.09	6.86	-.763	1346	18	6
.597	17.95	19.10	-1.146	8.15	9.30	-1.149	1347	18	8
.598	17.87	18.99	-1.119	10.21	11.63	-1.425	1348	18	10
.597	17.80	19.00	-1.205	12.26	13.95	-1.692	1349	18	12
.599	18.28	19.18	-.901	.06	.29	-.227	1350	18	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.60 137 5 0 2.58 67.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	16.25	17.04	-.789	-2.03	-1.97	-.066	1351	16	- 2
.599	16.26	17.05	-.788	.06	.27	-.210	1352	16	0
.598	16.19	16.96	-.771	2.06	2.43	-.366	1353	16	2
.599	16.09	16.87	-.783	4.06	4.60	-.542	1354	16	4
.598	15.99	16.93	-.932	6.10	6.88	-.783	1355	16	6
.598	15.93	16.90	-.973	8.15	9.24	-1.090	1356	16	8
.597	15.86	16.84	-.975	10.20	11.47	-1.271	1357	16	10
.596	15.79	16.91	-1.119	12.25	13.75	-1.501	1358	16	12
.598	16.26	17.06	-.798	.06	.31	-.242	1359	16	0

MREF RUN CONF PHI REYN TT8F
.60 138 5 0 2.57 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	14.20	14.91	-.715	-2.03	-1.94	-.087	1360	14	- 2
.598	14.26	14.96	-.701	.06	.28	-.217	1361	14	0
.598	14.15	14.75	-.601	2.07	2.47	-.393	1362	14	2
.599	14.06	14.75	-.684	4.07	4.63	-.560	1363	14	4
.598	13.99	14.79	-.805	6.10	6.82	-.719	1364	14	6
.600	13.92	14.74	-.825	8.15	9.12	-.977	1365	14	8
.599	13.84	14.66	-.813	10.19	11.32	-1.131	1366	14	10
.599	13.77	14.82	-1.048	12.25	13.46	-1.212	1367	14	12
.599	14.26	14.96	-.697	.06	.32	-.252	1368	14	0

MREF RUN CONF PHI REYN TT8F
.60 139 5 0 2.57 68.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	12.20	12.75	-.551	-2.02	-1.90	-.128	1369	12	- 2
.596	12.25	12.81	-.560	.05	.30	-.245	1370	12	0
.597	12.09	12.56	-.471	2.06	2.45	-.386	1371	12	2
.596	12.03	12.60	-.567	4.08	4.57	-.490	1372	12	4
.597	11.99	12.65	-.669	6.13	6.82	-.692	1373	12	6
.597	11.93	12.64	-.715	8.16	9.15	-.990	1374	12	8
.598	11.87	12.47	-.607	10.20	11.19	-.992	1375	12	10
.597	11.81	12.68	-.878	12.23	13.37	-1.139	1376	12	12
.598	12.25	12.83	-.582	.05	.32	-.272	1377	12	0

MREF RUN CONF PHI REYN TT8F
.60 140 5 0 2.57 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	10.16	10.52	-.362	-2.15	-2.00	-.148	1378	10	- 2
.600	10.14	10.52	-.380	-.07	.17	-.242	1379	10	0
.599	10.09	10.41	-.319	1.93	2.31	-.376	1380	10	2
.599	10.03	10.44	-.407	3.94	4.46	-.521	1381	10	4
.599	9.98	10.51	-.526	5.99	6.59	-.601	1382	10	6
.598	9.92	10.46	-.545	8.01	8.90	-.895	1383	10	8
.597	9.86	10.34	-.480	10.05	11.00	-.956	1384	10	10
.597	9.79	10.49	-.698	12.08	13.14	-1.060	1385	10	12
.597	10.14	10.53	-.388	-.07	.24	-.303	1386	10	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .60 141 5 0 2.58 67.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	8.17	8.50	-.330	-1.91	-1.72	-.184	1419	8	- 2
.599	8.13	8.48	-.336	.06	.34	-.277	1420	8	0
.599	8.15	8.44	-.288	1.92	2.26	-.341	1421	8	2
.599	8.06	8.40	-.341	3.94	4.42	-.476	1422	8	4
.598	7.98	8.45	-.469	6.00	6.59	-.595	1423	8	6
.598	7.91	8.42	-.507	8.04	8.85	-.817	1424	8	8
.598	7.85	8.32	-.468	10.06	10.91	-.851	1425	8	10
.598	7.79	8.38	-.589	12.09	13.09	-1.003	1426	8	12
.598	8.15	8.47	-.323	.06	.34	-.278	1427	8	0

MREF RUN CONF PHI REYN TT8F
 .60 142 5 0 2.58 67.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.599	6.14	6.37	-.227	-1.97	-1.78	-.183	1428	6	- 2
.599	6.14	6.32	-.184	.05	.34	-.290	1429	6	0
.599	6.16	6.32	-.166	1.97	2.31	-.342	1430	6	2
.599	6.07	6.31	-.240	3.96	4.41	-.442	1431	6	4
.598	5.99	6.39	-.395	6.00	6.60	-.593	1432	6	6
.598	5.95	6.29	-.348	8.04	8.83	-.793	1433	6	8
.599	5.90	6.19	-.293	10.10	10.91	-.811	1434	6	10
.598	5.85	6.35	-.495	12.13	13.07	-.938	1435	6	12
.600	6.14	6.35	-.219	.05	.34	-.293	1436	6	0

MREF RUN CONF PHI REYN TT8F
 .60 143 5 0 2.57 67.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	4.12	4.21	-.094	-1.99	-1.76	-.231	1437	4	- 2
.596	4.13	4.20	-.069	.05	.36	-.310	1438	4	0
.596	4.08	4.09	-.006	1.98	2.35	-.370	1439	4	2
.604	4.04	4.23	-.181	3.97	4.42	-.446	1440	4	4
.604	4.02	4.28	-.261	6.00	6.60	-.602	1441	4	6
.600	4.02	4.28	-.265	6.00	6.57	-.570	1442	4	6
.599	3.96	4.18	-.220	8.06	8.81	-.744	1443	4	8
.599	3.91	4.09	-.180	10.13	10.89	-.762	1444	4	10
.597	3.86	4.26	-.407	12.18	13.03	-.851	1445	4	12
.597	4.13	4.20	-.074	.06	.36	-.300	1446	4	0

FIGURE 13 SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.60 144 5 0 2.57 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	2.11	2.15	-.038	-1.99	-1.73	-.265	1447	2	- 2
.598	2.11	2.11	.007	.02	.35	-.332	1448	2	0
.597	2.10	2.02	.071	1.95	2.38	-.424	1449	2	2
.598	2.01	2.09	-.076	3.96	4.48	-.515	1450	2	4
.598	1.95	2.10	-.159	8.02	6.66	-.650	1451	2	6
.597	1.91	2.01	-.101	8.07	8.88	-.807	1452	2	8
.597	1.88	2.01	-.131	10.15	10.90	-.755	1453	2	10
.598	1.84	2.21	-.364	12.20	12.99	-.784	1454	2	12
.597	2.12	2.11	.001	.02	.38	-.359	1455	2	0

MREF RUN CONF PHI REYN TT8F
.60 145 5 0 2.58 66.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.597	1.12	1.11	.008	-2.00	-1.73	-.274	1456	1	- 2
.603	1.11	1.07	.047	.02	.37	-.345	1457	1	0
.598	1.06	.97	.090	1.96	2.40	-.443	1458	1	2
.595	1.00	1.04	-.036	3.97	4.50	-.535	1459	1	4
.597	.95	1.05	-.107	6.01	6.69	-.684	1460	1	6
.599	.90	.99	-.085	8.08	8.87	-.791	1461	1	8
.597	.86	.98	-.118	10.14	10.87	-.729	1462	1	10
.597	.83	1.09	-.261	11.97	12.75	-.778	1463	1	12
.598	1.11	1.04	.071	.02	.38	-.353	1464	1	0

MREF RUN CONF PHI REYN TT8F
.60 146 5 0 2.58 66.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	.11	.06	.054	-2.05	-1.72	-.337	1465	0	- 2
.596	.11	.04	.077	-.01	.37	-.376	1466	0	0
.596	.05	-.10	.150	1.96	2.39	-.437	1467	0	2
.596	-.01	-.01	.001	3.98	4.50	-.518	1468	0	4
.600	-.06	0.00	-.059	6.05	6.71	-.659	1469	0	6
.602	-.10	-.04	-.066	8.10	8.84	-.736	1470	0	8
.597	-.15	-.14	-.004	10.16	10.86	-.691	1471	0	10
.598	-.17	-.10	-.071	11.17	11.89	-.721	1472	0	11
.594	.11	.03	.086	0.00	.37	-.371	1473	0	0

MREF RUN CONF PHI REYN TT8F
.60 147 5 0 2.59 66.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.600	-.90	-1.00	.099	-2.04	-1.74	-.295	1474	- 1	- 2
.595	-.89	-1.03	.140	-.01	.34	-.345	1475	- 1	0
.600	-.97	-1.17	.205	1.97	2.38	-.411	1476	- 1	2
.597	-1.03	-1.12	.089	4.00	4.48	-.477	1477	- 1	4
.594	-1.07	-1.07	-.005	6.07	6.66	-.588	1478	- 1	6
.599	-1.11	-1.13	.016	8.08	8.88	-.791	1479	- 1	8
.600	-1.15	-1.22	.077	10.06	10.78	-.724	1480	- 1	10
.596	-.89	-1.02	.132	-.01	.35	-.355	1481	- 1	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .60 148 5 0 2.59 66.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.601	-1.90	-2.10	.201	-2.06	-1.82	-.249	1482	- 2	- 2
.596	-1.89	-2.08	.196	-.01	.30	-.309	1483	- 2	0
.600	-1.97	-2.24	.270	1.96	2.36	-.401	1484	- 2	2
.597	-2.02	-2.16	.138	4.01	4.48	-.476	1485	- 2	4
.599	-2.07	-2.11	.042	6.10	6.69	-.591	1486	- 2	6
.594	-2.11	-2.18	.074	8.15	8.88	-.727	1488	- 2	8
.602	-2.12	-2.17	.050	8.92	9.59	-.673	1489	- 2	9
.593	-1.89	-2.10	.207	0.00	.32	-.322	1490	- 2	0

MREF RUN CONF PHI REYN TT8F
 .60 149 5 0 2.59 66.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.598	4.13	4.17	-.042	.06	.36	-.305	1491	4	0
.599	2.12	2.14	-.019	.02	.37	-.344	1492	2	0
.598	.11	.04	.068	0.00	.37	-.370	1493	0	0
.598	-1.89	-2.08	.189	-.01	.33	-.338	1494	- 2	0
.602	.11	.05	.066	0.00	.36	-.366	1495	0	0

MREF RUN CONF PHI REYN TT8F
 .80 3 1 0 2.11 71.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.806	.10	0.00	.101	.05	.25	-.197	28	0	0
.800	4.11	4.20	-.086	.12	.26	-.142	29	4	0
.799	2.10	2.11	-.007	.09	.26	-.169	30	2	0
.801	1.10	1.08	.023	.09	.23	-.143	31	1	0
.803	.10	.06	.041	.06	.23	-.170	32	0	0
.796	-.90	-1.00	.099	.06	.19	-.132	33	- 1	0
.805	-1.90	-2.05	.150	.05	.13	-.071	34	- 2	0
.800	-2.92	-3.12	.207	.06	.09	-.033	35	- 3	0
.798	.10	.02	.078	.06	.25	-.190	36	0	0

MREF RUN CONF PHI REYN TT8F
 .80 4 1 0 2.09 72.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.800	.06	-.01	.074	-1.94	-1.82	-.119	37	0	- 2
.800	.10	.04	.064	.06	.23	-.171	38	0	0
.798	.03	-.10	.135	2.02	2.24	-.226	39	0	2
.798	-.03	-.01	-.016	4.02	4.31	-.290	40	0	4
.797	-.07	.02	-.090	6.05	6.48	-.432	41	0	6
.797	-.10	-.03	-.070	8.07	8.67	-.602	42	0	8
.801	-.14	-.14	.005	10.09	10.70	-.618	43	0	10
.800	-.15	-.10	-.053	11.02	11.66	-.648	44	0	11
.797	.10	.02	.078	.06	.24	-.176	45	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.80 28 2 1 2.15 62.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.804	-.10	-.13	.037	.17	.51	-.337	273	0	0
.800	-3.10	-3.28	.177	.13	.39	-.269	274	- 3	0
.799	-2.10	-2.26	.168	.14	.42	-.280	275	- 2	0
.800	-1.10	-1.22	.122	.14	.51	-.367	276	- 1	0
.800	-.09	-.16	.067	.17	.54	-.369	277	0	0
.799	.90	.87	.035	.17	.56	-.395	278	1	0
.800	1.91	1.94	-.030	.17	.59	-.417	279	2	0
.800	2.92	2.98	-.062	.17	.61	-.445	280	3	0
.799	-.10	-.16	.068	.17	.56	-.396	281	0	0

MREF RUN CONF PHI REYN TT8F
.80 29 2 1 2.14 63.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.797	-.06	-.13	.073	2.17	2.59	-.416	282	0	2
.798	-.10	-.15	.056	.17	.54	-.373	283	0	0
.797	-.04	-.01	-.027	-1.79	-1.53	-.255	284	0	- 2
.798	.02	-.08	.105	-3.79	-3.67	-.126	285	0	- 4
.798	.06	-.05	.115	-5.82	-5.84	.017	286	0	- 6
.798	.10	.02	.077	-7.84	-7.93	.093	287	0	- 8
.807	.13	.14	-.009	-9.86	-9.99	.138	288	0	-10
.798	.15	.11	.037	-10.71	-10.88	.174	289	0	-11

MREF RUN CONF PHI REYN TT8F
.80 56 3 10 2.11 69.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	.16	.02	.136	.10	.30	-.203	546	0	0
.799	.11	.02	.092	12.23	12.95	-.718	547	0	12
.800	.21	0.00	.213	10.17	10.83	-.655	548	0	10
.799	.09	.01	.079	8.13	8.67	-.535	549	0	8
.803	.10	.02	.079	6.12	6.55	-.430	550	0	6
.800	.10	-.02	.118	4.12	4.45	-.339	551	0	4
.803	.14	-.01	.149	2.09	2.32	-.230	552	0	2
.804	.16	.03	.136	.10	.28	-.187	553	0	0
.802	.16	.03	.134	-1.91	-1.78	-.126	554	0	- 2

MREF RUN CONF PHI REYN TT8F
.80 60 4 11 2.12 67.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.800	-.02	-.29	.271	-.10	.06	-.161	591	0	0
.798	.04	-.18	.215	-12.24	-12.58	.342	592	0	-12
.800	-.08	-.20	.122	-10.18	-10.44	.261	593	0	-10
.798	.05	-.21	.253	-8.14	-8.29	.157	594	0	- 8
.797	.04	-.22	.262	-6.12	-6.18	.061	595	0	- 6
.798	.04	-.23	.276	-4.12	-4.09	-.028	596	0	- 4
.798	.01	-.26	.266	-2.10	-2.01	-.093	597	0	- 2
.798	-.02	-.28	.258	-.10	.06	-.156	598	0	0
.796	-.02	-.29	.270	1.91	2.14	-.229	599	0	2

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .80 78 5 0 2.12 67.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	24.92	26.49	-1.566	.05	0.00	.046	818	25	0
.803	22.22	23.68	-1.459	.05	.05	-.002	819	22	0
.803	20.27	21.47	-1.206	.05	.21	-.160	820	20	0
.805	18.27	19.41	-1.141	.06	.30	-.240	821	18	0
.801	16.24	17.22	-.984	.07	.29	-.219	822	16	0
.799	14.26	15.02	-.765	.07	.28	-.211	823	14	0
.802	12.24	12.94	-.696	.05	.29	-.237	824	12	0
.800	10.08	10.67	-.589	-.06	.27	-.330	825	10	0
.804	8.14	8.55	-.413	.06	.29	-.231	826	8	0
.803	6.12	6.42	-.299	.06	.33	-.278	827	6	0
.804	4.12	4.31	-.193	.05	.38	-.329	828	4	0
.805	2.11	2.17	-.068	.02	.32	-.303	829	2	0
.802	1.10	1.10	.001	.02	.30	-.280	830	1	0
.803	1.10	1.11	-.005	.02	.31	-.285	831	1	0
.803	1.10	1.11	-.011	.02	.29	-.266	832	1	0
.801	.10	.08	.023	0.00	.26	-.264	833	0	0
.801	-.90	-.97	.071	0.00	.22	-.222	834	-1	0
.802	-1.90	-2.03	.133	-.01	.16	-.166	835	-2	0
.803	-1.90	-2.02	.115	-.01	.17	-.172	836	-2	0
.803	-2.91	-3.10	.182	-.01	.17	-.173	837	-3	0
.802	.10	.07	.028	0.00	.29	-.290	838	0	0

MREF RUN CONF PHI REYN TT8F
 .80 116 5 0 2.12 68.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.802	4.12	4.23	-.119	.06	.38	-.317	1177	4	0
.803	2.11	2.14	-.034	.02	.33	-.305	1178	2	0
.804	.10	.04	.059	0.00	.28	-.286	1179	0	0
.799	-1.90	-2.04	.145	0.00	.17	-.167	1180	-2	0
.798	.10	.07	.029	0.00	.28	-.277	1181	0	0

MREF RUN CONF PHI REYN TT8F
 .80 117 5 0 2.11 68.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	22.20	23.43	-1.226	-1.96	-2.28	.321	1182	22	-2
.797	22.21	23.49	-1.276	.05	.05	.004	1183	22	0
.796	22.16	23.38	-1.215	2.04	2.33	-.290	1184	22	2
.798	22.09	23.42	-1.332	4.03	4.76	-.727	1185	22	4
.798	22.03	23.36	-1.327	6.06	7.22	-1.157	1186	22	6
.801	21.97	23.43	-1.465	8.06	9.57	-1.507	1187	22	8
.799	21.95	23.42	-1.471	8.70	10.32	-1.616	1188	22	9
.800	22.21	23.49	-1.275	.05	.06	-.006	1189	22	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.80 118 5 0 2.12 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.803	20.19	21.40	-1.212	-1.96	-1.98	.022	1190	20	- 2
.801	20.26	21.39	-1.137	.05	.21	-.162	1191	20	0
.802	20.15	21.26	-1.110	2.03	2.38	-.347	1192	20	2
.801	20.08	21.32	-1.244	4.02	4.61	-.588	1193	20	4
.800	20.02	21.38	-1.364	6.03	6.92	-.883	1194	20	6
.800	19.96	21.24	-1.287	8.05	9.35	-1.304	1195	20	8
.799	19.89	21.22	-1.326	10.07	11.76	-1.690	1196	20	10
.800	19.86	21.23	-1.366	10.97	12.74	-1.768	1197	20	11
.798	20.26	21.43	-1.170	.06	.21	-.159	1198	20	0

MREF RUN CONF PHI REYN TT8F
.80 119 5 0 2.11 68.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	18.22	19.29	-1.067	-1.97	-1.93	-.034	1199	18	- 2
.797	18.27	19.29	-1.022	.07	.30	-.229	1200	18	0
.796	18.14	19.11	-.961	2.05	2.41	-.358	1201	18	2
.797	18.08	19.24	-1.161	4.04	4.59	-.546	1202	18	4
.798	18.02	19.24	-1.213	6.04	6.80	-.768	1203	18	6
.800	17.96	19.23	-1.271	8.05	9.17	-1.122	1204	18	8
.800	17.89	19.14	-1.250	10.07	11.47	-1.399	1205	18	10
.799	17.82	19.17	-1.346	12.08	13.80	-1.723	1206	18	12
.799	18.27	19.29	-1.016	.06	.31	-.244	1207	18	0

MREF RUN CONF PHI REYN TT8F
.80 120 5 0 2.12 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.799	16.20	17.12	-.923	-1.97	-1.95	-.022	1208	16	- 2
.797	16.25	17.14	-.897	.07	.27	-.204	1209	16	0
.798	16.18	17.01	-.837	2.07	2.41	-.347	1210	16	2
.798	16.07	17.02	-.948	4.04	4.56	-.521	1211	16	4
.800	15.99	17.02	-1.035	6.03	6.77	-.737	1212	16	6
.794	15.93	16.99	-1.060	8.05	9.12	-1.072	1213	16	8
.796	15.87	16.97	-1.098	10.06	11.32	-1.254	1214	16	10
.799	15.81	17.12	-1.302	12.07	13.53	-1.457	1215	16	12
.803	16.25	17.17	-.919	.07	.30	-.232	1216	16	0

MREF RUN CONF PHI REYN TT8F
.80 121 5 0 2.11 68.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.800	14.15	14.96	-.813	-1.98	-1.95	-.029	1217	14	- 2
.800	14.25	15.01	-.752	.07	.26	-.196	1218	14	0
.800	14.14	14.81	-.676	2.07	2.41	-.337	1219	14	2
.800	14.05	14.86	-.810	4.04	4.53	-.488	1220	14	4
.798	13.99	14.89	-.900	6.03	6.74	-.710	1221	14	6
.796	13.92	14.83	-.908	8.05	9.06	-1.014	1222	14	8
.796	13.86	14.80	-.940	10.06	11.22	-1.165	1223	14	10
.797	13.79	15.01	-1.216	12.07	13.36	-1.295	1224	14	12
.801	14.25	15.02	-.766	.07	.29	-.217	1225	14	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .80 122 5 0 2.11 68.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.800	12.15	12.77	-.621	-1.98	-1.90	-.077	1226	12	- 2
.802	12.23	12.86	-.624	.05	.28	-.233	1227	12	0
.801	12.07	12.61	-.546	2.05	2.40	-.350	1228	12	2
.801	12.01	12.72	-.703	4.05	4.52	-.468	1229	12	4
.800	11.98	12.74	-.763	6.07	6.76	-.688	1230	12	6
.800	11.92	12.68	-.756	8.06	9.02	-.957	1231	12	8
.798	11.87	12.60	-.723	10.07	11.10	-1.035	1232	12	10
.798	11.82	12.79	-.970	12.65	13.26	-1.217	1233	12	12
.800	12.23	12.88	-.645	.06	.28	-.223	1234	12	0

MREF RUN CONF PHI REYN TT8F
 .80 123 5 0 2.11 68.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.800	10.11	10.55	-.437	-2.09	-2.05	-.039	1235	10	- 2
.800	10.13	10.56	-.432	-.06	.13	-.195	1236	10	0
.801	10.08	10.45	-.372	1.93	2.26	-.334	1237	10	2
.801	10.02	10.54	-.524	3.92	4.40	-.486	1238	10	4
.800	9.98	10.57	-.596	5.93	6.54	-.620	1239	10	6
.799	9.92	10.49	-.570	7.92	8.83	-.905	1240	10	8
.797	9.87	10.40	-.527	9.91	10.88	-.964	1241	10	10
.796	9.81	10.57	-.753	11.93	13.09	-1.168	1242	10	12
.798	10.13	10.56	-.431	-.06	.20	-.263	1243	10	0

MREF RUN CONF PHI REYN TT8F
 .80 124 5 0 2.11 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.797	8.12	8.37	-.255	-1.86	-1.96	.100	1244	8	- 2
.799	8.14	8.30	-.160	.07	.23	-.159	1245	8	0
.797	8.13	8.22	-.089	1.93	2.35	-.418	1246	8	2
.796	8.04	8.36	-.314	3.93	4.53	-.604	1247	8	4
.796	7.97	8.38	-.414	5.94	6.71	-.766	1248	8	6
.802	7.92	8.37	-.458	7.94	8.89	-.953	1249	8	8
.804	7.86	8.35	-.487	9.92	10.98	-1.058	1250	8	10
.803	7.81	8.52	-.715	11.91	13.09	-1.182	1251	8	12
.800	8.14	8.29	-.158	.06	.25	-.189	1252	8	0

MREF RUN CONF PHI REYN TT8F
 .80 125 5 0 2.12 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	6.09	6.19	-.098	-1.92	-1.92	.002	1253	6	- 2
.801	6.12	6.13	-.010	.06	.27	-.218	1254	6	0
.801	6.14	6.07	.062	1.97	2.39	-.417	1255	6	2
.802	6.05	6.22	-.172	3.94	4.51	-.568	1256	6	4
.801	5.98	6.27	-.284	5.93	6.67	-.733	1257	6	6
.802	5.95	6.28	-.332	7.95	8.91	-.966	1258	6	8
.803	5.91	6.21	-.299	9.96	10.92	-.959	1259	6	10
.801	5.87	6.41	-.540	11.96	13.12	-1.157	1260	6	12
.804	6.12	6.16	-.036	.05	.29	-.238	1261	6	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.80 126 5 0 2.11 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	4.06	3.99	.076	-1.94	-1.84	-.099	1262	4	- 2
.798	4.11	4.00	.110	.06	.31	-.246	1263	4	0
.799	4.06	3.90	.163	1.98	2.43	-.445	1264	4	2
.797	4.03	4.10	-.074	3.98	4.56	-.584	1265	4	4
.797	4.01	4.13	-.126	5.95	6.67	-.719	1266	4	6
.797	3.96	4.13	-.166	7.97	8.91	-.944	1267	4	8
.796	3.92	4.09	-.173	9.99	10.97	-.982	1268	4	10
.798	3.87	4.29	-.416	12.00	13.15	-1.144	1269	4	12
.796	4.11	4.04	.074	.06	.33	-.268	1270	4	0

MREF RUN CONF PHI REYN TT8F
.80 127 5 0 2.11 68.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.797	2.06	1.93	.125	-1.95	-1.82	-.131	1271	2	- 2
.800	2.10	1.91	.181	.02	.31	-.282	1272	2	0
.796	2.07	1.79	.278	1.96	2.41	-.449	1273	2	2
.798	1.99	1.97	.019	3.94	4.52	-.577	1274	2	4
.798	1.93	2.01	-.079	5.98	6.71	-.734	1275	2	6
.798	1.91	2.02	-.109	7.97	8.92	-.947	1276	2	8
.797	1.88	1.97	-.087	10.02	10.94	-.921	1277	2	10
.796	1.85	2.22	-.362	12.03	13.09	-1.067	1278	2	12
.798	2.10	1.94	.159	.02	.33	-.308	1279	2	0

MREF RUN CONF PHI REYN TT8F
.80 128 5 0 2.11 68.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	1.06	.90	.162	-1.95	-1.82	-.130	1280	1	- 2
.797	1.10	.90	.197	.03	.31	-.280	1281	1	0
.799	1.04	.76	.281	1.97	2.38	-.415	1282	1	2
.797	.98	.91	.067	3.94	4.50	-.557	1283	1	4
.798	.93	.96	-.030	5.95	6.67	-.720	1284	1	6
.797	.90	.97	-.072	7.99	8.94	-.949	1285	1	8
.797	.87	.91	-.040	10.00	10.90	-.898	1286	1	10
.797	1.10	.90	.194	.03	.30	-.272	1287	1	0

MREF RUN CONF PHI REYN TT8F
.80 129 5 0 2.12 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	.06	-.17	.227	-2.00	-1.82	-.177	1288	0	- 2
.800	.10	-.16	.258	0.00	.30	-.304	1289	0	0
.800	.04	-.28	.320	1.95	2.35	-.393	1290	0	2
.800	-.02	-.14	.121	3.96	4.47	-.515	1291	0	4
.799	-.06	-.11	.042	6.00	6.66	-.665	1292	0	6
.797	-.10	-.10	-.002	8.03	8.90	-.867	1293	0	8
.798	-.13	-.16	.023	10.03	10.88	-.850	1294	0	10
.798	-.15	0.00	-.155	11.03	11.94	-.908	1295	0	11
.800	.10	-.15	.249	0.00	.30	-.302	1296	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .80 130 5 0 2.11 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.799	-.95	-1.22	.264	-1.99	-1.86	-.133	1297	- 1	- 2
.798	-.90	-1.18	.281	0.00	.24	-.237	1298	- 1	0
.798	-.98	-1.35	.370	1.98	2.32	-.343	1299	- 1	2
.798	-1.04	-1.20	.163	3.99	4.46	-.467	1300	- 1	4
.798	-1.08	-1.16	.079	6.01	6.57	-.562	1301	- 1	6
.798	-1.11	-1.17	.059	8.00	8.79	-.799	1302	- 1	8
.797	-1.14	-1.18	.046	9.97	10.79	-.827	1303	- 1	10
.800	-.90	-1.18	.281	0.00	.24	-.240	1304	- 1	0

MREF RUN CONF PHI REYN TT8F
 .80 131 5 0 2.11 68.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.797	-1.95	-2.25	.300	-2.01	-1.89	-.123	1305	- 2	- 2
.796	-1.91	-2.23	.327	0.00	.19	-.191	1306	- 2	0
.797	-1.99	-2.41	.417	1.96	2.27	-.310	1307	- 2	2
.796	-2.04	-2.23	.190	3.98	4.36	-.382	1308	- 2	4
.794	-2.08	-2.19	.109	6.04	6.56	-.523	1309	- 2	6
.793	-2.11	-2.17	.067	8.05	8.73	-.674	1310	- 2	8
.797	-1.91	-2.21	.303	0.00	.20	-.196	1311	- 2	0

MREF RUN CONF PHI REYN TT8F
 .80 132 5 0 2.12 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	4.12	4.23	-.117	.06	.36	-.303	1312	4	0
.800	2.09	2.12	-.031	.03	.34	-.308	1313	2	0
.802	.10	.07	.031	0.00	.27	-.266	1314	0	0
.801	-1.90	-2.05	.146	0.00	.16	-.164	1315	- 2	0
.799	.10	.06	.036	0.00	.27	-.273	1316	0	0

MREF RUN CONF PHI REYN TT8F
 .80 242 5 0 2.09 73.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.862	.06	.03	.027	-2.00	-1.79	-.212	2320	0	- 2
.800	.10	.04	.059	0.00	.29	-.290	2321	0	0
.798	.04	-.11	.142	1.96	2.33	-.373	2322	0	2
.860	-.02	.03	-.052	3.96	4.42	-.459	2323	0	4
.803	-.07	.02	-.084	5.99	6.59	-.605	2324	0	6
.800	-.10	-.04	-.060	8.01	8.80	-.789	2325	0	8
.799	-.14	-.11	-.022	10.03	10.84	-.817	2326	0	10
.800	-.15	-.06	-.097	10.97	11.79	-.821	2327	0	11
.802	.10	.04	.059	0.00	.30	-.301	2328	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .80 243 5 0 2.09 73.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	8.11	8.53	-.417	-1.85	-1.75	-.106	2329	8	- 2
.801	8.13	8.50	-.363	.07	.26	-.196	2330	8	0
.802	8.13	8.44	-.311	1.92	2.20	-.282	2331	8	2
.801	8.04	8.49	-.452	3.92	4.34	-.422	2332	8	4
.802	7.97	8.51	-.542	5.95	6.52	-.570	2333	8	6
.801	7.91	8.43	-.515	7.93	8.71	-.780	2334	8	8
.802	7.86	8.40	-.543	9.93	10.77	-.842	2335	8	10
.802	7.80	8.45	-.648	11.91	12.97	-1.060	2336	8	12
.805	8.13	8.49	-.354	.06	.30	-.237	2337	8	0

MREF RUN CONF PHI REYN TT8F
 .80 244 5 0 2.09 71.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.799	6.09	6.38	-.282	-1.92	-1.77	-.150	2338	6	- 2
.798	6.12	6.35	-.226	.06	.32	-.260	2339	6	0
.798	6.14	6.33	-.187	1.97	2.31	-.343	2340	6	2
.798	6.05	6.37	-.313	3.94	4.37	-.430	2341	6	4
.802	5.99	6.40	-.409	5.94	6.55	-.612	2342	6	6
.802	5.95	6.32	-.374	7.95	8.76	-.810	2343	6	8
.803	5.91	6.26	-.349	9.95	10.81	-.862	2344	6	10
.798	5.87	6.37	-.500	11.96	12.99	-1.035	2345	6	12
.803	6.12	6.37	-.245	.06	.34	-.286	2346	6	0

MREF RUN CONF PHI REYN TT8F
 .80 245 5 0 2.10 71.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.803	4.07	4.20	-.127	-1.94	-1.76	-.186	2347	4	- 2
.804	4.12	4.22	-.105	.06	.37	-.311	2348	4	0
.803	4.07	4.10	-.025	1.97	2.36	-.386	2349	4	2
.804	4.03	4.26	-.230	3.94	4.42	-.480	2350	4	4
.804	4.01	4.28	-.272	5.95	6.55	-.609	2351	4	6
.801	3.97	4.22	-.253	7.96	8.78	-.823	2352	4	8
.798	3.92	4.14	-.214	9.98	10.82	-.836	2353	4	10
.797	3.88	4.30	-.418	12.00	13.02	-1.018	2354	4	12
.801	4.12	4.22	-.096	.06	.38	-.320	2355	4	0

MREF RUN CONF PHI REYN TT8F
 .80 246 5 0 2.09 71.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.798	2.06	2.11	-.047	-1.94	-1.74	-.205	2356	2	- 2
.799	2.10	2.13	-.025	.02	.34	-.323	2357	2	0
.799	2.08	2.03	.045	1.96	2.39	-.431	2358	2	2
.800	2.00	2.13	-.130	3.95	4.43	-.484	2359	2	4
.800	1.94	2.12	-.178	5.96	6.57	-.619	2360	2	6
.799	1.91	2.05	-.136	7.97	8.78	-.806	2361	2	8
.799	1.89	2.03	-.143	10.00	10.86	-.861	2362	2	10
.800	1.86	2.20	-.338	12.03	13.02	-.990	2363	2	12
.801	2.10	2.12	-.014	.02	.36	-.339	2364	2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.80 247 5 0 2.09 72.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	1.07	1.09	-.028	-1.95	-1.74	-.213	2365	1	- 2
.802	1.10	1.10	.002	.02	.33	-.308	2366	1	0
.802	1.05	.97	.076	1.96	2.38	-.423	2367	1	2
.802	.98	1.07	-.086	3.95	4.45	-.508	2368	1	4
.801	.94	1.08	-.140	5.95	6.59	-.646	2369	1	6
.803	.91	1.01	-.103	7.97	8.80	-.824	2370	1	8
.802	.87	.97	-.096	10.00	10.84	-.839	2371	1	10
.801	.84	1.12	-.278	11.80	12.77	-.962	2372	1	12
.802	1.10	1.08	.019	.02	.33	-.312	2373	1	0

MREF RUN CONF PHI REYN TT8F
.80 248 5 0 2.10 72.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.804	-.95	-1.03	.077	-1.99	-1.84	-.144	2374	- 1	- 2
.804	-.90	-1.01	.111	0.00	.24	-.242	2375	- 1	0
.804	-.98	-1.18	.198	1.97	2.27	-.297	2376	- 1	2
.804	-1.04	-1.06	.018	3.98	4.34	-.365	2377	- 1	4
.804	-1.08	-1.04	-.041	6.01	6.53	-.521	2378	- 1	6
.802	-1.11	-1.09	-.015	7.99	8.74	-.755	2379	- 1	8
.803	-1.13	-1.19	.060	9.92	10.68	-.765	2380	- 1	10
.804	-.90	-1.03	.133	0.00	.24	-.241	2381	- 1	0

MREF RUN CONF PHI REYN TT8F
.80 249 5 0 2.10 72.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.805	-1.95	-2.09	.143	-2.02	-1.97	-.058	2382	- 2	- 2
.805	-1.90	-2.06	.162	-.01	.15	-.154	2383	- 2	0
.803	-1.99	-2.23	.248	1.95	2.18	-.226	2384	- 2	2
.803	-2.04	-2.12	.079	3.98	4.29	-.312	2385	- 2	4
.801	-2.07	-2.10	.020	6.03	6.50	-.466	2386	- 2	6
.802	-2.10	-2.14	.038	8.05	8.68	-.628	2387	- 2	8
.800	-2.12	-2.17	.058	8.78	9.39	-.602	2388	- 2	9
.803	-1.90	-2.08	.180	-.01	.17	-.178	2389	- 2	0

MREF RUN CONF PHI REYN TT8F
.80 250 5 0 2.10 71.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.801	4.12	4.24	-.120	.06	.36	-.301	2390	4	0
.802	2.11	2.13	-.023	.02	.35	-.326	2391	2	0
.801	.09	.03	.061	0.00	.28	-.282	2392	0	0
.799	-1.91	-2.07	.163	0.00	.15	-.156	2393	- 2	0
.797	.10	.05	.053	0.00	.31	-.309	2394	0	0

FIGURE 13 SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .90 5 1 0 1.94 72.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.906	.10	.08	.024	-.04	.04	-.083	46	0	0
.900	4.12	4.23	-.101	.01	.15	-.148	47	4	0
.901	2.12	2.15	-.038	-.02	.11	-.131	48	2	0
.900	1.11	1.11	0.000	-.03	.05	-.074	49	1	0
.900	.11	.08	.022	-.05	.12	-.170	50	0	0
.901	-.89	-.96	.065	-.05	.05	-.104	51	- 1	0
.901	-1.89	-1.99	.094	-.05	.03	-.081	52	- 2	0
.900	-2.90	-3.04	.136	-.05	.24	-.291	53	- 3	0
.900	.11	.06	.051	-.05	.13	-.178	54	0	0

MREF RUN CONF PHI REYN TT8F
 .90 6 1 0 1.93 72.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.902	.05	.01	.035	-2.02	-1.94	-.075	55	0	- 2
.900	.11	.07	.038	-.06	.10	-.159	56	0	0
.903	.11	.06	.044	-.05	.06	-.107	57	0	0
.901	.04	-.06	.091	1.92	2.04	-.115	58	0	2
.902	-.03	.01	-.035	3.95	4.14	-.184	59	0	4
.897	-.06	-.08	.019	6.00	6.30	-.305	60	0	6
.898	-.10	-.13	.038	8.04	8.49	-.447	61	0	8
.900	-.13	-.19	.065	10.09	10.54	-.453	62	0	10
.904	-.14	-.10	-.037	11.05	11.56	-.510	63	0	11
.904	.11	.07	.034	-.04	.05	-.091	64	0	0

MREF RUN CONF PHI REYN TT8F
 .90 22 1 0 5.51 92.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.903	.11	.06	.049	-.05	.12	-.166	207	0	0
.901	4.14	4.20	-.065	0.00	.20	-.196	208	4	0
.900	2.12	2.11	.009	-.03	.15	-.184	209	2	0
.901	1.12	1.08	.038	-.03	.13	-.160	210	1	0
.900	.11	.06	.055	-.06	.13	-.182	211	0	0
.900	-.89	-1.01	.116	-.06	.11	-.169	212	- 1	0
.901	-1.89	-2.04	.149	-.06	.08	-.139	213	- 2	0
.901	-2.91	-3.07	.156	-.06	.25	-.302	214	- 3	0
.905	.11	.07	.036	-.05	.12	-.162	215	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .90 23 1 0 3.32 88.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.902	.11	.05	.062	-.05	.16	-.211	216	0	0
.899	4.13	4.17	-.046	0.00	.23	-.229	217	4	0
.900	2.12	2.11	.012	-.03	.19	-.221	218	2	0
.901	1.11	1.07	.037	-.03	.18	-.211	219	1	0
.900	.11	.05	.059	-.06	.15	-.210	220	0	0
.901	-.89	-.97	.080	-.06	.13	-.186	221	- 1	0
.901	-1.90	-2.05	.148	-.06	.08	-.140	222	- 2	0
.900	-2.91	-3.06	.159	-.06	.05	-.109	223	- 3	0
.901	.11	.07	.041	-.05	.18	-.231	224	0	0

MREF RUN CONF PHI REYN TT8F
 .90 30 2 1 1.98 63.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.900	-.10	-.16	.056	.28	.48	-.204	292	0	0
.900	-3.12	-3.23	.114	.24	.43	-.191	293	- 3	0
.901	-2.11	-2.21	.102	.25	.42	-.172	294	- 2	0
.901	-1.10	-1.18	.071	.25	.47	-.218	295	- 1	0
.899	-.10	-.16	.053	.28	.49	-.215	296	0	0
.898	.90	.86	.037	.28	.49	-.211	297	1	0
.905	1.90	1.99	-.087	.27	.54	-.266	298	2	0
.901	2.92	2.99	-.071	.28	.50	-.223	300	3	0
.904	-.10	-.11	.015	.27	.48	-.205	301	0	0

MREF RUN CONF PHI REYN TT8F
 .90 31 2 1 1.98 63.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.903	-.04	-.08	.045	2.24	2.51	-.268	302	0	2
.901	-.10	-.12	.025	.28	.49	-.208	303	0	0
.900	-.04	.01	-.051	-1.69	-1.55	-.135	304	0	- 2
.902	.03	-.07	.100	-3.72	-3.66	-.064	305	0	- 4
.902	.06	.01	.051	-5.77	-5.75	-.019	306	0	- 6
.903	.10	.03	.069	-7.81	-7.90	.087	307	0	- 8
.903	.11	.09	.021	-8.84	-8.95	.111	308	0	- 9
.901	.14	.13	.010	-10.70	-10.84	.143	309	0	-11
.901	-.10	-.06	-.039	.28	.48	-.196	310	0	0

MREF RUN CONF PHI REYN TT8F
 .90 44 2 1 5.55 88.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.900	-.10	-.13	.025	.28	.40	-.121	430	0	0
.900	-3.12	-3.23	.109	.24	.45	-.209	431	- 3	0
.902	-2.11	-2.20	.096	.25	.35	-.106	432	- 2	0
.907	-.10	-.13	.029	.27	.40	-.135	434	0	0
.899	2.92	3.02	-.106	.28	.42	-.140	437	3	0
.900	-1.11	-1.15	.036	.25	.38	-.126	438	- 1	0
.898	.91	.93	-.025	.28	.41	-.131	439	1	0
.900	1.90	1.99	-.085	.28	.42	-.144	440	2	0
.899	-.10	-.08	-.018	.28	.40	-.122	441	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.90 55 3 10 1.94 71.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.902	.27	.04	.222	.10	.24	-.135	537	0	0
.899	.22	-.09	.312	12.24	12.70	-.541	538	0	12
.897	.32	-.42	.741	10.18	10.70	-.524	539	0	10
.900	.20	-.05	.246	8.14	8.52	-.383	540	0	8
.899	.21	-.01	.222	6.12	6.42	-.300	541	0	6
.902	.21	-.01	.218	4.12	4.34	-.222	542	0	4
.901	.24	.02	.219	2.11	2.24	-.134	543	0	2
.900	.27	.04	.225	.11	.21	-.107	544	0	0
.900	.27	.04	.224	-1.90	-1.83	-.070	545	0	-2

MREF RUN CONF PHI REYN TT8F
.90 67 4 11 1.93 71.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.898	-.13	-.27	.139	-.11	-.01	-.099	656	0	0
.896	-.07	-.11	.032	-12.25	-12.54	.289	657	0	-12
.902	-.18	-.16	-.023	-10.19	-10.42	.236	658	0	-10
.905	-.06	-.17	.108	-8.15	-8.28	.130	659	0	-8
.905	-.06	-.19	.127	-6.13	-6.17	.040	660	0	-6
.903	-.07	-.22	.154	-4.12	-4.11	-.011	661	0	-4
.902	-.10	-.24	.144	-2.11	-2.05	-.060	662	0	-2
.901	-.13	-.25	.120	-.11	0.00	-.106	663	0	0
.901	-.13	-.28	.145	1.89	2.03	-.138	664	0	2

MREF RUN CONF PHI REYN TT8F
.90 77 5 0 1.97 65.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.906	24.86	26.52	-1.663	-.05	.01	-.063	800	25	0
.903	22.22	23.62	-1.395	-.06	.42	-.480	801	22	0
.903	20.27	21.44	-1.170	-.06	.38	-.435	802	20	0
.903	18.28	19.26	-.980	-.05	.24	-.290	803	18	0
.905	16.24	17.03	-.781	-.04	.26	-.296	804	16	0
.905	14.27	14.95	-.682	-.04	.24	-.272	805	14	0
.902	12.25	12.98	-.735	-.06	.22	-.281	806	12	0
.906	10.08	10.77	-.687	-.16	.23	-.392	807	10	0
.897	8.15	8.53	-.387	-.05	.26	-.301	808	8	0
.903	6.13	6.40	-.276	-.05	.26	-.310	809	6	0
.899	4.13	4.23	-.100	-.06	.26	-.320	810	4	0
.902	2.11	2.16	-.052	-.09	.25	-.336	811	2	0
.904	1.11	1.14	-.028	-.08	.26	-.339	812	1	0
.903	.11	.12	-.013	-.11	.23	-.333	813	0	0
.904	-.89	-.92	.030	-.11	.19	-.303	814	-1	0
.906	-1.90	-1.96	.060	-.10	.19	-.293	815	-2	0
.903	-2.91	-3.03	.128	-.11	.22	-.328	816	-3	0
.901	.11	.06	.047	-.11	.21	-.326	817	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.90 81 5 0 1.96 66.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.902	6.13	6.41	-.283	-.05	.26	-.310	875	6	0
.901	4.13	4.25	-.124	-.05	.27	-.327	876	4	0
.903	2.11	2.15	-.043	-.08	.24	-.324	877	2	0
.903	1.11	1.10	.010	-.08	.25	-.330	878	1	0
.902	.11	.09	.020	-.11	.21	-.318	879	0	0
.902	-.90	-.99	.091	-.11	.15	-.261	880	- 1	0
.902	-1.90	-2.02	.121	-.11	.18	-.289	881	- 2	0
.902	-2.91	-3.04	.136	-.11	.21	-.321	882	- 3	0
.904	.10	.12	-.020	-.11	.22	-.324	883	0	0

MREF RUN CONF PHI REYN TT8F
.90 82 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.906	.04	.09	-.048	-2.07	-1.79	-.278	884	0	- 2
.906	.10	.12	-.025	-.10	.22	-.326	885	0	0
.907	.03	-.05	.078	1.88	2.20	-.326	886	0	2
.907	-.03	.02	-.052	3.90	4.28	-.380	887	0	4
.903	-.07	.01	-.076	5.94	6.43	-.491	888	0	6
.900	-.10	-.08	-.019	7.98	8.61	-.630	889	0	8
.901	-.13	-.13	0.000	10.03	10.62	-.593	890	0	10
.904	-.14	-.22	.084	10.99	11.64	-.649	891	0	11
.905	.10	.09	.010	-.10	.22	-.328	892	0	0

MREF RUN CONF PHI REYN TT8F
.90 83 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.907	1.05	1.17	-.124	-2.02	-1.75	-.277	893	1	- 2
.900	1.11	1.08	.026	-.09	.25	-.335	894	1	0
.906	1.04	1.01	.026	1.87	2.25	-.374	895	1	2
.907	.97	1.09	-.121	3.88	4.29	-.409	896	1	4
.906	.94	1.03	-.095	5.91	6.42	-.510	897	1	6
.901	.91	.96	-.052	7.95	8.63	-.678	898	1	8
.902	.88	.59	.287	10.01	10.69	-.682	899	1	10
.905	.86	1.04	-.183	11.83	12.54	-.708	900	1	12
.903	1.10	1.11	-.005	-.08	.26	-.339	901	1	0

MREF RUN CONF PHI REYN TT8F
.90 84 5 0 1.96 67.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	2.05	2.11	-.058	-2.02	-1.80	-.217	902	2	- 2
.901	2.11	2.14	-.028	-.09	.24	-.331	903	2	0
.903	2.08	2.03	.050	1.86	2.24	-.372	904	2	2
.901	2.00	2.15	-.156	3.86	4.28	-.419	905	2	4
.902	1.94	2.06	-.114	5.90	6.41	-.503	906	2	6
.901	1.92	2.01	-.091	7.95	8.64	-.685	907	2	8
.902	1.90	1.61	.287	10.00	10.70	-.695	908	2	10
.905	1.88	1.89	-.006	12.06	12.83	-.770	909	2	12
.905	2.11	2.20	-.091	-.08	.28	-.360	910	2	0

FIGURE 1: SUMMARY OF NASA/PARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.90 85 5 0 1.95 66.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.899	4.06	4.18	-.125	-2.02	-1.84	-.179	911	4	- 2
.900	4.13	4.23	-.100	-.06	.26	-.312	912	4	0
.904	4.07	4.10	-.036	1.88	2.23	-.341	913	4	2
.901	4.03	4.27	-.244	3.87	4.27	-.401	914	4	4
.902	4.01	4.24	-.225	5.90	6.42	-.528	915	4	6
.902	3.97	4.19	-.215	7.95	8.61	-.667	916	4	8
.902	3.93	4.15	-.214	9.99	10.67	-.687	917	4	10
.901	3.89	4.31	-.422	12.03	12.81	-.778	918	4	12
.903	4.12	4.25	-.125	-.05	.28	-.329	919	4	0

MREF RUN CONF PHI REYN TT8F
.90 86 5 0 1.96 67.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.902	6.08	6.36	-.281	-2.00	-1.81	-.185	920	6	- 2
.900	6.13	6.36	-.234	-.06	.25	-.301	921	6	0
.901	6.14	6.32	-.180	1.88	2.21	-.334	922	6	2
.902	6.05	6.35	-.304	3.87	4.25	-.388	923	6	4
.898	5.99	6.33	-.341	5.88	6.42	-.537	924	6	6
.900	5.95	6.27	-.317	7.92	8.64	-.718	925	6	8
.900	5.92	6.27	-.354	9.95	10.66	-.717	926	6	10
.900	5.88	6.12	-.236	11.98	12.88	-.894	927	6	12
.904	6.13	6.40	-.274	-.05	.29	-.333	928	6	0

MREF RUN CONF PHI REYN TT8F
.90 87 5 0 1.96 67.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.900	-.97	-1.06	.095	-2.07	-1.85	-.213	929	- 1	- 2
.902	-.90	-.97	.072	-.11	.18	-.291	930	- 1	0
.902	-.98	-1.15	.164	1.88	2.22	-.340	931	- 1	2
.902	-1.04	-1.05	.003	3.91	4.28	-.368	932	- 1	4
.901	-1.08	-1.06	-.020	5.95	6.45	-.494	933	- 1	6
.902	-1.10	-1.10	-.002	7.97	8.61	-.647	934	- 1	8
.902	-1.13	-1.22	.095	9.89	10.56	-.671	935	- 1	10
.897	-.89	-1.01	.119	-.11	.22	-.335	936	- 1	0

MREF RUN CONF PHI REYN TT8F
.90 88 5 0 1.96 67.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.899	-1.96	-2.11	.150	-2.09	-1.91	-.180	937	- 2	- 2
.902	-1.90	-2.02	.121	-.11	.17	-.279	938	- 2	0
.901	-1.98	-2.22	.238	1.86	2.16	-.307	939	- 2	2
.900	-2.04	-2.09	.095	3.90	4.28	-.376	940	- 2	4
.899	-2.07	-2.12	.048	5.98	6.44	-.454	941	- 2	6
.900	-2.10	-2.17	.070	8.02	8.62	-.596	942	- 2	8
.900	-2.11	-2.20	.096	9.77	9.35	-.577	943	- 2	9
.904	-1.90	-2.02	.117	-.11	.21	-.316	944	- 2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.90 89 5 0 1.96 68.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.900	8.11	8.51	-.403	-1.94	-1.77	-.163	945	8	- 2
.902	8.14	8.54	-.394	-.04	.24	-.290	946	8	0
.902	8.13	8.46	-.327	1.83	2.17	-.345	947	8	2
.905	8.04	8.49	-.450	3.86	4.30	-.447	948	8	4
.899	7.97	8.43	-.458	5.89	6.46	-.562	949	8	6
.900	7.92	8.09	-.169	7.91	8.69	-.783	950	8	8
.903	7.87	8.03	-.152	9.93	10.73	-.798	951	8	10
.903	7.82	8.21	-.388	11.94	12.92	-.982	952	8	12
.904	8.14	8.60	-.458	-.04	.26	-.305	953	8	0

MREF RUN CONF PHI REYN TT8F
.90 90 5 0 1.96 67.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.904	10.09	10.64	-.543	-2.16	-2.08	-.086	955	10	- 2
.904	10.13	10.65	-.514	-.17	.08	-.246	956	10	0
.905	10.07	10.51	-.436	1.85	2.20	-.358	957	10	2
.902	10.01	10.57	-.551	3.84	4.32	-.474	958	10	4
.903	9.98	10.28	-.306	5.88	6.51	-.630	959	10	6
.900	9.93	10.17	-.239	7.89	8.72	-.829	960	10	8
.902	9.88	10.09	-.213	9.91	10.81	-.903	961	10	10
.902	9.83	10.29	-.466	11.93	12.96	-1.031	962	10	12
.903	10.13	10.64	-.508	-.17	.14	-.309	963	10	0

MREF RUN CONF PHI REYN TT8F
.90 91 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	12.14	12.84	-.706	-2.06	-1.96	-.101	964	12	- 2
.901	12.25	12.94	-.692	-.06	.22	-.283	965	12	0
.901	12.07	12.69	-.614	1.96	2.34	-.377	966	12	2
.898	12.02	12.73	-.708	3.98	4.46	-.486	967	12	4
.902	11.98	12.46	-.482	6.02	6.72	-.693	968	12	6
.901	11.94	12.41	-.474	8.04	8.98	-.936	969	12	8
.905	11.89	12.34	-.446	10.07	11.07	-1.001	970	12	10
.905	11.84	12.59	-.741	12.08	13.22	-1.140	971	12	12
.902	12.25	12.98	-.732	-.06	.25	-.308	972	12	0

MREF RUN CONF PHI REYN TT8F
.90 92 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.899	14.13	15.00	-.868	-2.06	-1.99	-.063	973	14	- 2
.904	14.26	14.92	-.667	-.04	.24	-.273	974	14	0
.896	14.14	14.68	-.546	1.98	2.39	-.411	975	14	2
.899	14.05	14.71	-.662	3.97	4.52	-.542	976	14	4
.899	13.99	14.67	-.679	5.98	6.71	-.732	977	14	6
.901	13.93	14.61	-.682	8.03	9.01	-.978	978	14	8
.899	13.87	14.54	-.678	10.05	11.12	-1.068	979	14	10
.902	13.81	14.74	-.933	12.10	13.32	-1.219	980	14	12
.905	14.26	15.15	-.898	-.84	.24	-.276	981	14	0

FIGURE 13 SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.90 93 5 0 1.96 67.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.903	16.18	16.94	-.763	-2.05	-1.99	-.063	982	16	- 2
.902	16.25	17.05	-.795	-.04	.24	-.283	983	16	0
.899	16.18	17.00	-.821	1.97	2.39	-.426	984	16	2
.901	16.07	16.93	-.862	3.97	4.54	-.576	985	16	4
.902	15.99	16.90	-.915	6.01	6.79	-.776	986	16	6
.903	15.94	16.84	-.904	8.03	9.04	-1.020	987	16	8
.902	15.88	16.76	-.882	10.06	11.27	-1.205	988	16	10
.902	15.83	16.87	-1.049	12.10	13.59	-1.486	989	16	12
.903	16.25	16.98	-.728	-.04	.24	-.281	990	16	0

MREF RUN CONF PHI REYN TT8F
.90 94 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	18.21	19.19	-.980	-2.04	-2.01	-.039	991	18	- 2
.898	18.28	19.19	-.913	-.05	.22	-.268	992	18	0
.902	18.14	19.05	-.905	1.96	2.40	-.439	993	18	2
.900	18.08	19.09	-1.011	4.00	4.63	-.630	994	18	4
.899	18.03	19.17	-1.138	5.99	6.81	-.824	995	18	6
.898	17.96	19.05	-1.092	8.05	9.24	-1.192	996	18	8
.903	17.90	18.87	-.967	10.07	11.64	-1.565	997	18	10
.901	17.83	19.04	-1.211	12.11	13.77	-1.661	998	18	12
.900	18.28	19.24	-.960	-.05	.24	-.286	999	18	0

MREF RUN CONF PHI REYN TT8F
.90 95 5 0 1.96 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.898	20.18	21.37	-1.185	-2.03	-1.85	-.172	1000	20	- 2
.902	20.27	21.45	-1.183	-.05	.38	-.435	1001	20	0
.898	20.16	21.20	-1.042	1.94	2.52	-.581	1002	20	2
.901	20.08	21.24	-1.158	3.95	4.82	-.873	1003	20	4
.903	20.03	21.31	-1.286	5.99	7.09	-1.097	1004	20	6
.899	19.97	21.18	-1.217	8.03	9.51	-1.483	1005	20	8
.897	19.90	20.98	-1.080	10.07	11.80	-1.734	1006	20	10
.898	19.88	20.94	-1.064	10.94	12.74	-1.801	1007	20	11
.900	20.27	21.31	-1.041	-.06	.37	-.430	1008	20	0

MREF RUN CONF PHI REYN TT8F
.90 96 5 0 1.96 68.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	22.19	23.51	-1.328	-2.04	-1.89	-.146	1009	22	- 2
.899	22.22	23.58	-1.363	-.06	.43	-.489	1010	22	0
.900	22.16	23.31	-1.148	1.94	2.57	-.633	1011	22	2
.900	22.09	23.48	-1.390	3.96	4.92	-.963	1012	22	4
.901	22.03	23.43	-1.401	6.01	7.26	-1.246	1013	22	6
.900	21.97	23.32	-1.346	8.03	9.69	-1.661	1014	22	8
.903	21.96	23.31	-1.351	8.61	10.40	-1.792	1015	22	9
.901	22.22	23.62	-1.400	-.06	.45	-.511	1016	22	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .90 97 5 0 1.96 67.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	4.12	4.27	-.145	-.05	.27	-.326	1017	4	0
.900	2.11	2.13	-.023	-.09	.25	-.336	1018	2	0
.899	.11	.08	.032	-.11	.20	-.316	1019	0	0
.907	-1.90	-1.97	.073	-.10	.20	-.297	1020	- 2	0
.901	.10	.06	.047	-.11	.21	-.320	1021	0	0

MREF RUN CONF PHI REYN TT8F
 .90 239 5 0 5.50 91.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.899	.11	.15	-.039	-.11	.19	-.304	2287	0	0
.902	10.22	10.77	-.542	-.17	.23	-.402	2288	10	0
.900	8.18	8.48	-.300	-.05	.25	-.295	2289	8	0
.900	6.15	6.38	-.232	-.06	.25	-.303	2290	6	0
.903	4.14	4.29	-.152	-.05	.22	-.274	2291	4	0
.903	2.12	2.22	-.103	-.08	.21	-.297	2292	2	0
.901	1.11	1.19	-.081	-.09	.20	-.282	2293	1	0
.902	.11	.17	-.068	-.11	.19	-.305	2294	0	0
.903	-.90	-.86	-.033	-.11	.19	-.299	2295	- 1	0
.902	-1.90	-1.91	.014	-.11	.21	-.326	2296	- 2	0
.901	-2.91	-2.97	.056	-.11	.32	-.439	2297	- 3	0
.901	.11	.17	-.063	-.11	.20	-.312	2298	0	0

MREF RUN CONF PHI REYN TT8F
 .90 240 5 0 3.33 86.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.901	.11	.12	-.013	-.11	.22	-.332	2299	0	0
.900	10.20	10.66	-.457	-.17	.26	-.432	2300	10	0
.905	8.16	8.50	-.345	-.04	.27	-.306	2301	8	0
.901	6.14	6.36	-.221	-.05	.30	-.350	2302	6	0
.905	4.13	4.27	-.142	-.05	.27	-.315	2303	4	0
.904	2.11	2.17	-.065	-.08	.24	-.320	2304	2	0
.905	1.10	1.15	-.046	-.08	.21	-.293	2305	1	0
.903	.10	.13	-.034	-.11	.21	-.317	2306	0	0
.902	-.89	-.90	.002	-.11	.19	-.302	2307	- 1	0
.901	-1.89	-1.92	.027	-.12	.19	-.300	2308	- 2	0
.899	-2.91	-2.98	.072	-.12	.13	-.251	2309	- 3	0
.900	.11	.12	-.008	-.12	.21	-.329	2310	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11' X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.95 7 1 0 1.84 68.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.952	.06	.10	-.047	.06	.24	-.185	66	0	0
.947	4.07	4.46	-.390	.11	.27	-.165	68	4	0
.949	2.06	2.27	-.212	.08	.27	-.189	69	2	0
.953	1.06	1.17	-.112	.08	.26	-.183	71	1	0
.949	.06	.15	-.090	.05	.27	-.214	72	0	0
.950	-.95	-.94	-.009	.05	.27	-.211	73	- 1	0
.954	-1.94	-2.06	.116	.06	.24	-.187	74	- 2	0
.945	-2.95	-3.11	.153	.04	.27	-.230	75	- 3	0
.951	.06	.07	-.009	.06	.27	-.214	76	0	0

MREF RUN CONF PHI REYN TT8F
.95 8 1 0 1.83 70.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.949	.02	.09	-.066	-1.95	-1.82	-.125	77	0	- 2
.948	.06	.12	-.060	.05	.24	-.195	78	0	0
.948	-.02	.01	-.035	2.02	2.29	-.266	79	0	2
.952	-.08	.07	-.143	4.05	4.38	-.330	80	0	4
.952	-.09	.04	-.126	6.09	6.55	-.462	81	0	6
.952	-.09	.03	-.116	8.13	8.74	-.614	82	0	8
.952	-.09	-.03	-.065	10.16	10.80	-.636	83	0	10
.952	-.09	.04	-.134	11.13	11.78	-.657	84	0	11
.947	.06	.12	-.060	.05	.27	-.220	85	0	0

MREF RUN CONF PHI REYN TT8F
.95 15 1 0 1.81 72.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.948	.06	.13	-.078	.05	.24	-.193	144	0	0
.944	4.08	4.44	-.361	.10	.28	-.175	145	4	0
.951	2.05	2.25	-.192	.08	.26	-.181	146	2	0
.948	1.06	1.21	-.149	.07	.26	-.183	148	1	0
.954	.05	.09	-.041	.05	.26	-.204	149	0	0
.953	-.95	-.94	-.009	.05	.25	-.196	150	- 1	0
.953	-1.95	-2.04	.088	.05	.26	-.206	151	- 2	0
.952	-2.96	-3.12	.161	.05	.25	-.196	152	- 3	0
.954	.06	.11	-.048	.05	.25	-.198	153	0	0

MREF RUN CONF PHI REYN TT8F
.95 32 2 1 1.85 64.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.947	-.05	.02	-.073	.18	.54	-.357	311	0	0
.950	-3.06	-3.24	.179	.13	.51	-.374	312	- 3	0
.951	-2.05	-2.14	.089	.15	.52	-.367	313	- 2	0
.946	-1.05	-1.06	.009	.16	.55	-.394	314	- 1	0
.947	-.06	.01	-.068	.18	.56	-.380	315	0	0
.952	.95	1.07	-.117	.18	.56	-.382	316	1	0
.950	1.95	2.1	-.182	.18	.56	-.385	317	2	0
.948	2.97	3.23	-.264	.18	.55	-.373	318	3	0
.954	-.05	-.04	-.008	.18	.56	-.380	319	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 33 2 1 1.85 64.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.944	-.02	.06	-.073	2.19	2.62	-.439	320	0	2
.955	-.05	-.03	-.022	.18	.58	-.401	321	0	0
.946	.02	.12	-.108	-1.79	-1.52	-.272	322	0	-2
.951	.08	.06	.025	-3.82	-3.66	-.152	323	0	-4
.948	.09	.09	.003	-5.86	-5.82	-.040	324	0	-6
.951	.10	.09	.002	-7.90	-7.97	.070	325	0	-8
.947	.10	.16	-.064	-9.93	-10.05	.121	326	0	-10
.955	.10	.12	-.025	-10.80	-10.94	.136	327	0	-11
.957	-.05	-.01	-.036	.17	.55	-.372	328	0	0

MREF RUN CONF PHI REYN TT8F
 .95 54 3 10 1.81 72.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.945	.17	.16	.010	.06	.29	-.235	528	0	0
.953	.11	.11	.004	12.18	12.89	-.709	529	0	12
.953	.22	.12	.098	10.13	10.80	-.674	530	0	10
.950	.09	.07	.022	8.09	8.66	-.574	531	0	8
.950	.10	.09	.014	6.08	6.54	-.485	532	0	6
.947	.11	.14	-.032	4.07	4.43	-.364	533	0	4
.950	.14	.15	-.010	2.06	2.35	-.298	534	0	2
.951	.16	.16	.008	.04	.27	-.232	535	0	0
.953	.16	.14	.026	-1.95	-1.80	-.152	536	0	-2

MREF RUN CONF PHI REYN TT8F
 .95 66 4 11 1.81 73.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.949	-.02	-.14	.118	-.05	.12	-.169	646	0	0
.953	.03	-.16	.187	-12.19	-12.60	.404	647	0	-12
.953	-.08	-.15	.071	-10.14	-10.47	.332	648	0	-10
.951	.04	-.12	.166	-8.09	-8.29	.201	649	0	-8
.951	.04	-.14	.179	-6.08	-6.19	.110	650	0	-6
.954	.04	-.15	.187	-4.06	-4.04	-.013	651	0	-4
.954	0.00	-.17	.178	-2.06	-1.97	-.093	652	0	-2
.952	-.02	-.20	.175	-.06	.14	-.199	653	0	0
.953	-.02	-.17	.145	1.95	2.19	-.239	654	0	2
.955	-.02	-.21	.184	-.06	.13	-.181	655	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 76 5 0 1.81 72.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.946	24.86	27.86	-2.998	.04	.14	-.102	781	25	0
.948	22.21	24.63	-2.421	.04	.41	-.372	782	22	0
.951	20.25	22.43	-2.179	.05	.46	-.409	783	20	0
.955	18.26	19.98	-1.714	.06	.22	-.166	784	18	0
.953	16.24	17.80	-1.565	.06	.27	-.211	785	16	0
.953	14.25	15.59	-1.340	.06	.26	-.192	786	14	0
.955	12.23	13.24	-1.002	.05	.29	-.246	787	12	0
.956	10.17	11.07	-.898	-.06	.31	-.374	788	10	0
.952	8.14	8.90	-.762	.06	.34	-.282	789	8	0
.956	6.11	6.61	-.500	.05	.32	-.262	790	6	0
.949	4.11	4.54	-.433	.05	.31	-.256	791	4	0
.953	2.10	2.28	-.182	.02	.29	-.268	792	2	0
.949	1.10	1.26	-.164	.02	.30	-.285	793	1	0
.947	.09	.20	-.102	-.01	.30	-.312	794	0	0
.946	-.90	-.89	-.010	-.02	.28	-.293	795	- 1	0
.947	-1.90	-1.97	.067	-.01	.28	-.295	796	- 2	0
.951	-2.92	-3.07	.156	-.01	.28	-.287	797	- 3	0
.954	.10	.14	-.041	-.01	.28	-.286	798	0	0

MREF RUN CONF PHI REYN TT8F
 .95 98 5 0 1.84 67.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.949	4.07	4.47	-.395	.05	.30	-.248	1022	4	0
.944	2.07	2.28	-.216	.01	.29	-.281	1023	2	0
.954	.05	.12	-.061	0.00	.28	-.281	1024	0	0
.952	-1.95	-2.05	.098	0.00	.26	-.269	1025	- 2	0
.948	.05	.15	-.094	-.01	.28	-.286	1026	0	0

MREF RUN CONF PHI REYN TT8F
 .95 99 5 0 1.84 67.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.950	22.16	24.41	-2.256	-1.97	-1.88	-.088	1027	22	- 2
.945	22.17	24.64	-2.470	.04	.38	-.343	1028	22	0
.949	22.10	24.43	-2.331	2.04	2.29	-.246	1029	22	2
.948	22.04	24.37	-2.328	4.06	4.53	-.470	1030	22	4
.948	22.01	24.27	-2.262	6.11	6.95	-.839	1031	22	6
.947	21.98	24.33	-2.356	8.12	9.65	-1.533	1032	22	8
.949	21.97	24.20	-2.235	8.71	10.31	-1.599	1033	22	9
.947	22.17	24.61	-2.437	.04	.39	-.345	1034	22	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 100 5 0 1.83 66.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.946	20.15	22.34	-2.186	-1.96	-1.81	-.145	1035	20	- 2
.947	20.21	22.48	-2.262	.04	.46	-.418	1036	20	0
.950	20.09	22.21	-2.126	2.04	2.56	-.515	1037	20	2
.953	20.02	22.00	-1.982	4.05	4.80	-.745	1038	20	4
.948	20.00	22.10	-2.106	6.07	7.07	-1.000	1039	20	6
.950	19.96	21.88	-1.920	8.11	9.49	-1.372	1040	20	8
.952	19.93	21.65	-1.723	10.15	11.54	-1.390	1041	20	10
.952	19.92	21.68	-1.768	11.04	12.45	-1.412	1042	20	11
.945	20.22	22.56	-2.347	.04	.49	-.455	1043	20	0

MREF RUN CONF PHI REYN TT8F
 .95 101 5 0 1.84 67.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.951	18.18	19.96	-1.781	-1.97	-1.89	-.079	1044	18	- 2
.943	18.23	20.31	-2.086	.04	.23	-.184	1045	18	0
.951	18.08	19.87	-1.794	2.07	2.32	-.245	1046	18	2
.950	18.02	19.90	-1.884	4.07	4.55	-.485	1047	18	4
.944	18.00	19.86	-1.858	6.07	6.84	-.770	1048	18	6
.948	17.96	19.61	-1.654	8.12	9.18	-1.058	1049	18	8
.952	17.93	19.40	-1.475	10.15	11.56	-1.416	1050	18	10
.942	17.88	19.63	-1.755	12.17	13.57	-1.406	1051	18	12
.950	18.22	20.10	-1.881	.06	.24	-.177	1053	18	0
.951	18.22	19.91	-1.688	.06	.23	-.167	1054	18	0

MREF RUN CONF PHI REYN TT8F
 .95 102 5 0 1.84 67.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.946	16.16	18.00	-1.838	-1.99	-1.87	-.123	1055	16	- 2
.948	16.20	18.07	-1.869	.06	.26	-.202	1056	16	0
.951	16.11	17.70	-1.587	2.07	2.33	-.254	1057	16	2
.946	16.02	17.68	-1.655	4.06	4.49	-.429	1058	16	4
.944	15.97	17.60	-1.628	6.07	6.75	-.679	1059	16	6
.947	15.94	17.38	-1.439	8.11	9.04	-.935	1060	16	8
.950	15.91	17.25	-1.336	10.14	11.28	-1.143	1061	16	10
.948	15.88	17.30	-1.420	12.17	13.60	-1.431	1062	16	12
.949	16.20	17.89	-1.684	.06	.28	-.221	1063	16	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
.95 103 5 0 1.84 68.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.947	14.11	15.66	-1.556	-1.99	-1.86	-.125	1064	14	- 2
.950	14.21	15.70	-1.493	.06	.25	-.188	1065	14	0
.948	14.08	15.56	-1.482	2.07	2.37	-.295	1066	14	2
.944	14.01	15.45	-1.445	4.06	4.52	-.466	1067	14	4
.951	13.96	15.19	-1.228	6.09	6.73	-.642	1068	14	6
.952	13.93	15.15	-1.223	8.11	9.00	-.899	1069	14	8
.951	13.90	15.09	-1.197	10.14	11.17	-1.036	1070	14	10
.945	13.86	15.10	-1.245	12.16	13.34	-1.180	1071	14	12
.946	14.21	15.84	-1.633	.06	.26	-.200	1072	14	0

MREF RUN CONF PHI REYN TT8F
.95 104 5 0 1.84 67.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.950	12.11	13.28	-1.171	-1.98	-1.87	-.113	1073	12	- 2
.948	12.19	13.54	-1.344	.04	.26	-.223	1074	12	0
.943	12.02	13.18	-1.163	2.05	2.38	-.332	1075	12	2
.953	11.96	13.07	-1.104	4.08	4.50	-.419	1076	12	4
.945	11.96	13.07	-1.113	6.11	6.72	-.615	1077	12	6
.948	11.94	12.95	-1.013	8.12	8.96	-.832	1078	12	8
.949	11.92	12.85	-.933	10.13	11.04	-.906	1079	12	10
.945	11.89	12.97	-1.079	12.14	13.17	-1.039	1080	12	12
.951	12.19	13.44	-1.247	.05	.32	-.269	1081	12	0

MREF RUN CONF PHI REYN TT8F
.95 105 5 0 1.84 67.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.946	10.07	11.06	-.990	-2.11	-2.01	-.092	1082	10	- 2
.949	10.08	11.04	-.955	-.07	.16	-.228	1083	10	0
.951	10.02	10.84	-.825	1.95	2.30	-.355	1084	10	2
.952	9.96	10.86	-.902	3.94	4.39	-.444	1085	10	4
.944	9.95	10.79	-.840	5.97	6.53	-.560	1086	10	6
.951	9.93	10.70	-.768	7.99	8.75	-.760	1087	10	8
.949	9.90	10.58	-.675	9.98	10.83	-.843	1088	10	10
.947	9.88	10.75	-.876	11.99	13.01	-1.021	1089	10	12
.948	10.08	11.06	-.978	-.07	.26	-.336	1090	10	0

MREF RUN CONF PHI REYN TT8F
.95 106 5 0 1.84 66.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.948	8.08	8.90	-.822	-1.86	-1.70	-.163	1092	8	- 2
.950	8.09	8.94	-.846	.06	.32	-.253	1093	8	0
.947	8.07	8.88	-.801	1.93	2.27	-.343	1094	8	2
.947	7.99	8.73	-.742	3.94	4.37	-.430	1095	8	4
.947	7.95	8.64	-.696	5.98	6.50	-.517	1096	8	6
.950	7.92	8.59	-.666	7.99	8.70	-.707	1097	8	8
.948	7.90	8.59	-.690	10.00	10.78	-.784	1098	8	10
.949	7.88	8.62	-.745	12.01	12.99	-.983	1099	8	12
.947	8.09	8.94	-.845	.05	.34	-.290	1100	8	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 107 5 0 1.85 66.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.957	4.07	4.30	-.225	.05	.29	-.236	1105	4	0
.948	2.06	2.26	-.200	.02	.29	-.273	1106	2	0
.948	.06	.13	-.069	-.01	.27	-.281	1107	0	0
.956	-1.95	-2.08	.130	-.01	.24	-.250	1108	- 2	0
.945	.06	.16	-.098	-.02	.27	-.285	1109	0	0

MREF RUN CONF PHI REYN TT8F
 .95 108 5 0 1.84 66.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.948	6.05	6.63	-.573	-1.93	-1.77	-.156	1110	6	- 2
.952	6.08	6.48	-.406	.05	.30	-.247	1111	6	0
.949	6.08	6.65	-.576	1.98	2.30	-.319	1112	6	2
.946	6.00	6.54	-.537	3.96	4.35	-.390	1113	6	4
.947	5.96	6.47	-.504	5.98	6.49	-.513	1114	6	6
.944	5.96	6.55	-.594	8.00	8.71	-.717	1115	6	8
.951	5.95	6.44	-.492	10.03	10.81	-.783	1116	6	10
.945	5.94	6.53	-.598	12.05	13.00	-.950	1117	6	12
.942	6.09	6.68	-.597	.03	.34	-.307	1118	6	0

MREF RUN CONF PHI REYN TT8F
 .95 109 5 0 1.84 66.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.951	4.03	4.36	-.330	-1.95	-1.81	-.134	1119	4	- 2
.951	4.07	4.41	-.337	.06	.30	-.242	1120	4	0
.951	4.01	4.30	-.291	1.99	2.31	-.323	1121	4	2
.955	3.98	4.40	-.422	3.98	4.38	-.395	1122	4	4
.952	3.99	4.32	-.338	5.99	6.50	-.512	1123	4	6
.954	3.97	4.33	-.360	8.03	8.72	-.689	1124	4	8
.948	3.96	4.30	-.340	10.06	10.81	-.747	1125	4	10
.944	3.94	4.42	-.476	12.09	13.03	-.939	1126	4	12
.948	4.07	4.46	-.393	.05	.30	-.252	1127	4	0

MREF RUN CONF PHI REYN TT8F
 .95 110 5 0 1.84 67.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.953	2.02	2.21	-.190	-1.95	-1.79	-.157	1128	2	- 2
.956	2.05	2.18	-.130	.02	.28	-.260	1129	2	0
.956	2.01	2.14	-.130	1.97	2.30	-.335	1130	2	2
.952	1.94	2.24	-.301	3.97	4.39	-.417	1131	2	4
.949	1.91	2.19	-.274	5.99	6.53	-.545	1132	2	6
.947	1.92	2.15	-.235	8.03	8.76	-.727	1133	2	8
.947	1.92	2.12	-.197	10.07	10.82	-.744	1134	2	10
.948	1.93	2.27	-.341	12.12	13.00	-.877	1135	2	12
.945	2.06	2.29	-.226	.01	.30	-.293	1136	2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 111 5 0 1.84 67.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.944	1.03	1.22	-.199	-1.97	-1.81	-.158	1137	1	- 2
.944	1.06	1.21	-.150	0.00	.27	-.272	1138	1	0
.943	.99	1.15	-.165	1.96	2.33	-.366	1139	1	2
.952	.92	1.19	-.264	3.97	4.38	-.412	1140	1	4
.958	.91	1.10	-.187	6.00	6.56	-.562	1141	1	6
.959	.91	1.10	-.186	8.04	8.73	-.695	1142	1	8
.952	.91	1.09	-.181	10.09	10.84	-.746	1143	1	10
.947	.91	1.21	-.308	11.90	12.76	-.853	1144	1	12
.947	1.06	1.21	-.152	.01	.30	-.289	1145	1	0

MREF RUN CONF PHI REYN TT8F
 .95 112 5 0 1.84 67.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.951	.02	.10	-.082	-2.01	-1.82	-.190	1146	0	- 2
.949	.05	.13	-.082	-.01	.28	-.284	1147	0	0
.947	-.02	.06	-.086	1.96	2.31	-.352	1148	0	2
.947	-.08	.12	-.204	3.98	4.41	-.434	1149	0	4
.945	-.09	.07	-.162	6.04	6.59	-.553	1150	0	6
.946	-.10	.05	-.145	8.06	8.76	-.701	1151	0	8
.947	-.10	.01	-.114	10.12	10.82	-.703	1152	0	10
.949	-.10	.05	-.155	11.08	11.82	-.747	1153	0	11
.948	.05	.13	-.081	-.01	.29	-.299	1154	0	0

MREF RUN CONF PHI REYN TT8F
 .95 113 5 0 1.84 68.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.948	-.99	-.98	-.011	-1.99	-1.83	-.165	1155	- 1	- 2
.948	-.94	-.92	-.018	-.01	.28	-.293	1156	- 1	0
.950	-1.04	-1.06	.021	1.99	2.34	-.345	1157	- 1	2
.953	-1.09	-1.02	-.071	4.03	4.43	-.396	1158	- 1	4
.953	-1.10	-1.03	-.071	6.07	6.60	-.534	1159	- 1	6
.952	-1.10	-1.05	-.056	8.06	8.60	-.541	1160	- 1	6
.953	-1.10	-1.05	-.047	8.05	8.75	-.705	1161	- 1	8
.949	-1.10	-1.07	-.025	9.98	10.69	-.714	1162	- 1	10
.952	-.94	-1.00	.052	-.01	.28	-.290	1163	- 1	0

MREF RUN CONF PHI REYN TT8F
 .95 114 5 0 1.83 67.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.945	-1.99	-2.05	.065	-2.03	-1.87	-.160	1164	- 2	- 2
.943	-1.94	-2.02	.075	-.02	.28	-.304	1165	- 2	0
.953	-2.05	-2.19	.147	1.97	2.31	-.342	1166	- 2	2
.952	-2.09	-2.09	.001	4.01	4.43	-.417	1167	- 2	4
.952	-2.10	-2.09	-.004	6.10	6.62	-.525	1168	- 2	6
.953	-2.09	-2.12	.024	8.11	8.72	-.603	1169	- 2	8
.952	-2.09	-2.13	.040	8.82	9.45	-.625	1170	- 2	9
.950	-1.95	-2.03	.079	-.01	.28	-.289	1171	- 2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
 .95 115 5 0 1.84 68.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.952	4.06	4.38	-.313	.06	.32	-.259	1172	4	0
.952	2.06	2.24	-.184	.02	.29	-.265	1173	2	0
.950	.05	.12	-.065	0.00	.28	-.282	1174	0	0
.951	-1.96	-2.05	.097	0.00	.28	-.288	1175	-2	0
.945	.06	.15	-.092	-.01	.29	-.303	1176	0	0

MREF RUN CONF PHI REYN TT8F
 .95 241 5 0 1.81 76.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.954	.02	.08	-.055	-2.00	-1.81	-.191	2311	0	-2
.958	.06	.08	-.025	-.01	.26	-.271	2312	0	0
.956	-.02	0.00	-.024	1.97	2.31	-.340	2313	0	2
.951	-.08	.11	-.191	3.99	4.41	-.414	2314	0	4
.948	-.09	.08	-.169	6.03	6.57	-.538	2315	0	6
.948	-.09	.06	-.155	8.06	8.72	-.660	2316	0	8
.946	-.10	0.00	-.103	10.10	10.73	-.634	2317	0	10
.954	-.10	.06	-.159	11.08	11.76	-.683	2318	0	11
.953	.05	.13	-.079	0.00	.29	-.292	2319	0	0

MREF RUN CONF PHI REYN TT8F
 .95 251 5 0 1.82 71.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.949	8.08	8.88	-.803	-1.86	-1.73	-.130	2395	8	-2
.955	8.09	8.82	-.723	.06	.29	-.230	2396	8	0
.957	8.08	8.66	-.589	1.94	2.25	-.311	2397	8	2
.957	7.99	8.69	-.700	3.96	4.38	-.424	2398	8	4
.956	7.95	8.67	-.719	5.99	6.52	-.524	2399	8	6
.955	7.93	8.61	-.682	8.00	8.72	-.721	2400	8	8
.947	7.90	8.62	-.723	10.00	10.74	-.739	2401	8	10
.945	7.87	8.67	-.795	12.00	12.94	-.942	2402	8	12
.954	8.09	8.86	-.762	.06	.32	-.259	2403	8	0

MREF RUN CONF PHI REYN TT8F
 .95 252 5 0 1.99 65.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
.397	8.15	8.41	-.259	-1.79	-1.72	-.068	2404	8	-2
.401	8.15	8.42	-.266	-1.79	-1.73	-.063	2405	8	-2
.400	8.17	8.46	-.292	.16	.31	-.144	2406	8	0
.398	8.17	8.38	-.204	2.04	2.23	-.195	2407	8	2
.399	8.08	8.39	-.304	4.04	4.39	-.348	2408	8	4
.400	8.00	8.42	-.423	6.06	6.58	-.520	2409	8	6
.397	7.93	8.36	-.429	8.04	8.82	-.778	2410	8	8
.399	7.87	8.30	-.428	10.03	10.93	-.899	2411	8	10
.400	7.80	8.37	-.564	12.02	13.11	-1.096	2412	8	12
.400	8.00	8.44	-.439	6.06	6.65	-.593	2413	8	6
.398	8.17	8.46	-.295	.16	.33	-.173	2414	8	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 9 1 0 2.75 78.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	.08	0.00	.079	.05	.24	-.184	86	0	0
1.051	4.09	4.28	-.186	.11	.26	-.150	87	4	0
1.051	2.08	2.15	-.073	.08	.24	-.158	88	2	0
1.054	1.08	1.10	-.018	.08	.22	-.146	89	1	0
1.049	.07	.03	.043	.05	.21	-.153	90	0	0
1.052	-.93	-1.03	.101	.05	.16	-.112	91	- 1	0
1.053	-1.92	-2.09	.169	.05	.21	-.154	92	- 2	0
1.052	-2.94	-3.17	.227	.05	.22	-.165	93	- 3	0
1.053	.08	.01	.062	.05	.23	-.179	94	0	0

MREF RUN CONF PHI REYN TT8F
1.05 10 1 0 2.73 80.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.051	.06	0.00	.057	-1.93	-1.91	-.025	95	0	- 2
1.051	.07	.02	.057	.05	.21	-.158	96	0	0
1.054	0.00	-.09	.086	2.05	2.35	-.300	97	0	2
1.053	-.05	-.05	.001	4.07	4.51	-.438	98	0	4
1.051	-.06	-.05	-.009	6.11	6.76	-.652	99	0	6
1.049	-.06	-.07	.005	8.14	9.01	-.878	100	0	8
1.052	-.07	-.12	.058	10.16	11.14	-.972	101	0	10
1.051	-.07	-.03	-.040	11.12	12.19	-1.028	102	0	11
1.055	.07	.02	.055	.06	.24	-.183	103	0	0

MREF RUN CONF PHI REYN TT8F
1.05 34 2 1 2.78 73.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	-.07	-.11	.042	.17	.53	-.356	336	0	0
1.052	-.07	-.10	.029	.17	.52	-.351	337	0	0
1.052	-3.08	-3.28	.203	.13	.51	-.384	338	- 3	0
1.050	-2.07	-2.21	.141	.15	.51	-.362	339	- 2	0
1.050	-1.07	-1.17	.095	.15	.51	-.367	340	- 1	0
1.051	-.07	-.10	.033	.17	.51	-.333	341	0	0
1.052	.93	.96	-.032	.17	.54	-.370	342	1	0
1.054	1.94	2.04	-.107	.17	.56	-.389	343	2	0
1.054	2.95	3.10	-.150	.18	.56	-.381	344	3	0
1.048	-.07	-.10	.026	.18	.52	-.344	345	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 35 2 1 2.78 73.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.050	-.05	-.10	.050	2.17	2.65	-.479	346	0	2
1.053	-.07	-.08	.007	.18	.53	-.353	347	0	0
1.054	0.00	0.00	0.000	-1.82	-1.61	-.202	348	0	-2
1.053	.05	-.03	.080	-3.85	-3.85	.006	349	0	-4
1.053	.06	-.01	.077	-5.89	-6.09	.201	352	0	-6
1.053	.07	.03	.035	-7.91	-8.33	.427	353	0	-8
1.052	.07	.08	-.015	-9.93	-10.47	.540	354	0	-10
1.054	.07	.07	-.001	-10.78	-11.39	.606	355	0	-11
1.051	-.07	-.07	-.002	.17	.50	-.332	356	0	0

MREF RUN CONF PHI REYN TT8F
1.05 53 3 10 2.73 81.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	.16	.04	.118	.07	.19	-.120	519	0	0
1.054	.11	-.01	.123	12.22	13.22	-.999	520	0	12
1.052	.22	-.01	.230	10.17	11.08	-.915	521	0	10
1.053	.09	-.01	.106	8.12	8.90	-.779	522	0	8
1.049	.10	-.02	.125	6.09	6.68	-.585	523	0	6
1.052	.10	0.00	.099	4.10	4.52	-.428	524	0	4
1.053	.14	.02	.114	2.08	2.34	-.259	525	0	2
1.052	.16	.05	.114	.07	.18	-.114	526	0	0
1.052	.16	.04	.118	-1.93	-2.01	.079	527	0	-2

MREF RUN CONF PHI REYN TT8F
1.05 65 4 11 2.72 82.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	-.02	-.26	.235	-.07	.18	-.250	637	0	0
1.051	.03	-.25	.284	-12.23	-12.98	.758	638	0	-12
1.053	-.08	-.26	.177	-10.17	-10.80	.631	639	0	-10
1.050	.04	-.19	.234	-8.12	-8.58	.461	640	0	-8
1.050	.04	-.21	.248	-6.09	-6.35	.263	641	0	-6
1.052	.04	-.22	.256	-4.09	-4.20	.105	642	0	-4
1.054	0.00	-.24	.242	-2.08	-2.04	-.039	643	0	-2
1.052	-.02	-.24	.222	-.07	.19	-.259	644	0	0
1.052	-.02	-.24	.214	1.93	2.36	-.429	645	0	2

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 75 5 0 2.73 80.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	24.90	26.94	-2.033	.05	.09	-.041	763	25	0
1.052	22.26	24.06	-1.800	.05	.32	-.272	764	22	0
1.053	20.31	21.89	-1.580	.05	.35	-.300	765	20	0
1.052	18.31	19.84	-1.529	.06	.27	-.212	766	18	0
1.055	16.28	17.51	-1.232	.06	.26	-.201	767	16	0
1.056	14.29	15.31	-1.018	.06	.27	-.204	768	14	0
1.055	12.27	13.16	-.897	.05	.25	-.199	769	12	0
1.054	10.21	10.97	-.761	-.06	.31	-.370	770	10	0
1.055	8.16	8.68	-.522	.06	.35	-.289	771	8	0
1.055	6.14	6.54	-.396	.05	.29	-.241	772	6	0
1.052	4.13	4.35	-.221	.05	.27	-.216	773	4	0
1.050	2.12	2.21	-.097	.02	.27	-.244	774	2	0
1.051	1.10	1.13	-.031	.02	.23	-.213	775	1	0
1.051	.11	.08	.036	0.00	.22	-.227	776	0	0
1.053	-.89	-.98	.094	-.01	.22	-.225	777	- 1	0
1.051	-1.89	-2.05	.163	-.01	.24	-.248	778	- 2	0
1.054	-2.91	-3.13	.222	-.01	.24	-.243	779	- 3	0
1.053	.11	.08	.028	0.00	.23	-.233	780	0	0

MREF RUN CONF PHI REYN TT8F
1.05 168 5 0 2.76 77.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	4.09	4.28	-.192	.05	.30	-.252	1664	4	0
1.054	2.07	2.15	-.074	.02	.27	-.247	1665	2	0
1.055	.07	.04	.029	-.01	.24	-.246	1666	0	0
1.053	-1.93	-2.09	.155	-.01	.23	-.238	1667	- 2	0
1.053	.07	.05	.023	-.01	.25	-.254	1668	0	0

MREF RUN CONF PHI REYN TT8F
1.05 169 5 0 2.75 77.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.050	22.23	23.94	-1.709	-1.95	-2.05	.095	1669	22	- 2
1.054	22.22	23.91	-1.687	.05	.33	-.277	1670	22	0
1.054	22.17	23.75	-1.588	2.06	2.47	-.404	1671	22	2
1.050	22.10	23.78	-1.679	4.09	4.80	-.714	1672	22	4
1.053	22.08	23.80	-1.719	6.12	7.15	-1.024	1673	22	6
1.049	22.04	23.66	-1.614	8.12	9.54	-1.415	1674	22	8
1.050	22.03	23.61	-1.580	8.65	10.08	-1.423	1675	22	9
1.047	22.23	23.87	-1.638	.05	.31	-.255	1676	22	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 170 5 0 2.75 78.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	20.22	21.76	-1.542	-1.94	-1.94	-.003	1677	20	- 2
1.052	20.26	21.80	-1.540	.05	.31	-.267	1678	20	0
1.055	20.15	21.65	-1.502	2.06	2.51	-.448	1679	20	2
1.052	20.09	21.58	-1.496	4.08	4.73	-.650	1680	20	4
1.050	20.06	21.54	-1.478	6.09	7.09	-1.000	1681	20	6
1.049	20.03	21.45	-1.427	8.12	9.54	-1.419	1682	20	8
1.050	19.99	21.33	-1.339	10.15	11.64	-1.489	1683	20	10
1.057	19.98	21.33	-1.352	11.06	12.60	-1.538	1684	20	11
1.051	20.26	21.82	-1.558	.05	.36	-.310	1685	20	0

MREF RUN CONF PHI REYN TT8F
1.05 171 5 0 2.75 77.4

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.054	18.24	19.62	-1.380	-1.96	-2.02	.062	1686	18	- 2
1.052	18.27	19.60	-1.333	.06	.30	-.235	1687	18	0
1.056	18.13	19.49	-1.358	2.09	2.55	-.463	1688	18	2
1.055	18.08	19.49	-1.411	4.09	4.79	-.697	1689	18	4
1.055	18.06	19.45	-1.393	6.10	7.01	-.911	1690	18	6
1.052	18.02	19.36	-1.338	8.12	9.40	-1.277	1691	18	8
1.054	17.98	19.26	-1.281	10.15	11.52	-1.377	1692	18	10
1.053	17.95	19.23	-1.280	12.17	13.73	-1.557	1693	18	12
1.049	18.27	19.65	-1.376	.06	.31	-.256	1694	18	0

MREF RUN CONF PHI REYN TT8F
1.05 172 5 0 2.75 77.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.052	16.21	17.42	-1.209	-1.97	-2.05	.073	1695	16	- 2
1.055	16.24	17.44	-1.196	.06	.27	-.204	1696	16	0
1.050	16.16	17.31	-1.148	2.10	2.43	-.338	1697	16	2
1.049	16.07	17.21	-1.140	4.09	4.67	-.579	1698	16	4
1.054	16.02	17.25	-1.237	6.09	6.94	-.844	1699	16	6
1.051	15.99	17.23	-1.241	8.11	9.27	-1.157	1700	16	8
1.053	15.96	17.05	-1.091	10.14	11.49	-1.353	1701	16	10
1.051	15.93	17.09	-1.154	12.16	13.72	-1.557	1702	16	12
1.050	16.24	17.43	-1.186	.07	.28	-.214	1703	16	0

MREF RUN CONF PHI REYN TT8F
1.05 173 5 0 2.76 77.2

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	14.16	15.24	-1.078	-1.97	-2.02	.048	1704	14	- 2
1.053	14.25	15.24	-.989	.07	.28	-.214	1705	14	0
1.054	14.12	15.12	-.996	2.10	2.50	-.402	1706	14	2
1.055	14.05	15.09	-1.047	4.09	4.67	-.580	1707	14	4
1.053	14.01	15.09	-1.077	6.10	6.87	-.773	1708	14	6
1.052	13.98	15.04	-1.063	8.12	9.12	-1.008	1709	14	8
1.052	13.95	14.93	-.986	10.13	11.30	-1.170	1710	14	10
1.049	13.91	14.87	-.954	12.16	13.62	-1.456	1711	14	12
1.052	14.25	15.26	-1.012	.06	.31	-.245	1712	14	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 174 5 0 2.75 77.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.055	12.16	13.04	-.888	-1.97	-2.02	.048	1713	12	- 2
1.054	12.22	13.09	-.870	.05	.29	-.239	1714	12	0
1.052	12.05	12.84	-.793	2.08	2.52	-.431	1715	12	2
1.054	12.00	12.88	-.879	4.11	4.68	-.572	1716	12	4
1.053	12.00	12.87	-.877	6.13	6.86	-.729	1717	12	6
1.053	11.98	12.84	-.864	8.13	9.09	-.957	1718	12	8
1.051	11.96	12.73	-.777	10.13	11.19	-1.057	1719	12	10
1.050	11.94	12.75	-.811	12.13	13.47	-1.332	1720	12	12
1.053	12.22	13.06	-.837	.05	.29	-.243	1721	12	0

MREF RUN CONF PHI REYN TT8F
1.05 175 5 0 2.75 77.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.050	10.11	10.71	-.597	-2.09	-2.07	-.018	1722	10	- 2
1.052	10.11	10.73	-.615	-.07	.17	-.239	1723	10	0
1.052	10.05	10.62	-.573	1.97	2.37	-.405	1724	10	2
1.051	10.00	10.64	-.637	3.97	4.48	-.511	1725	10	4
1.050	9.99	10.60	-.615	5.99	6.65	-.661	1726	10	6
1.052	9.97	10.62	-.653	7.99	8.92	-.929	1727	10	8
1.051	9.94	10.52	-.573	9.98	11.01	-1.029	1728	10	10
1.055	9.92	10.55	-.626	11.99	13.19	-1.204	1729	10	12
1.052	10.11	10.76	-.642	-.06	.22	-.287	1730	10	0

MREF RUN CONF PHI REYN TT8F
1.05 176 5 0 2.76 77.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.057	8.12	8.67	-.549	-1.85	-1.81	-.042	1736	8	- 2
1.056	8.12	8.66	-.541	.06	.28	-.215	1737	8	0
1.053	8.10	8.64	-.533	1.95	2.32	-.371	1738	8	2
1.053	8.02	8.56	-.542	3.98	4.48	-.502	1739	8	4
1.052	7.98	8.58	-.594	6.01	6.66	-.656	1740	8	6
1.052	7.96	8.58	-.624	8.00	8.88	-.877	1741	8	8
1.049	7.94	8.46	-.524	10.00	11.05	-1.051	1742	8	10
1.053	7.91	8.49	-.578	12.00	13.26	-1.257	1743	8	12
1.051	8.12	8.66	-.545	.06	.31	-.250	1744	8	0

MREF RUN CONF PHI REYN TT8F
1.05 177 5 0 2.76 76.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.049	6.09	6.46	-.371	-1.91	-1.77	-.148	1745	6	- 2
1.052	6.09	6.48	-.383	.06	.31	-.249	1746	6	0
1.052	6.10	6.48	-.378	2.00	2.37	-.369	1747	6	2
1.050	6.02	6.43	-.408	3.99	4.53	-.538	1748	6	4
1.050	5.99	6.44	-.455	6.00	6.71	-.714	1749	6	6
1.052	5.98	6.42	-.438	8.01	8.91	-.901	1750	6	8
1.052	5.98	6.33	-.355	10.03	11.05	-1.020	1751	6	10
1.051	5.97	6.39	-.420	12.05	13.28	-1.229	1752	6	12
1.056	6.10	6.49	-.390	.06	.32	-.263	1753	6	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 178 5 0 2.76 76.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.050	4.06	4.29	-.227	-1.94	-1.87	-.069	1754	4	- 2
1.048	4.09	4.29	-.198	.05	.29	-.234	1755	4	0
1.055	4.03	4.23	-.195	2.01	2.41	-.409	1756	4	2
1.055	4.01	4.30	-.298	4.00	4.50	-.502	1757	4	4
1.051	4.02	4.32	-.303	6.01	6.71	-.701	1758	4	6
1.050	4.00	4.26	-.256	8.04	8.92	-.884	1759	4	8
1.056	3.99	4.19	-.198	10.06	10.97	-.915	1760	4	10
1.055	3.98	4.27	-.296	12.09	13.27	-1.184	1761	4	12
1.056	4.09	4.30	-.211	.06	.31	-.258	1762	4	0

MREF RUN CONF PHI REYN TT8F
1.05 179 5 0 2.76 77.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.055	2.06	2.19	-.130	-1.94	-1.92	-.022	1763	2	- 2
1.054	2.08	2.17	-.098	.02	.29	-.266	1764	2	0
1.051	2.04	2.14	-.094	1.99	2.37	-.382	1765	2	2
1.049	1.97	2.13	-.159	3.99	4.52	-.525	1766	2	4
1.052	1.94	2.11	-.170	6.02	6.73	-.702	1767	2	6
1.055	1.95	2.07	-.124	8.04	8.94	-.897	1768	2	8
1.054	1.96	2.06	-.105	10.08	11.10	-1.020	1769	2	10
1.054	1.96	2.13	-.172	12.11	13.32	-1.210	1770	2	12
1.056	2.08	2.17	-.093	.02	.30	-.277	1771	2	0

MREF RUN CONF PHI REYN TT8F
1.05 180 5 0 2.76 76.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	1.06	1.15	-.088	-1.95	-1.88	-.068	1772	1	- 2
1.053	1.07	1.12	-.047	.02	.26	-.245	1773	1	0
1.053	1.01	1.05	-.039	2.00	2.39	-.396	1774	1	2
1.052	.95	1.07	-.115	4.00	4.54	-.539	1775	1	4
1.053	.94	1.07	-.131	6.01	6.77	-.756	1776	1	6
1.052	.94	1.02	-.081	8.04	8.98	-.938	1777	1	8
1.053	.94	1.01	-.072	10.08	11.09	-1.009	1778	1	10
1.054	.94	1.06	-.118	11.90	13.08	-1.182	1779	1	12
1.052	1.07	1.11	-.042	.02	.26	-.241	1780	1	0

MREF RUN CONF PHI REYN TT8F
1.05 181 5 0 2.76 77.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	.05	.05	-.002	-1.99	-1.92	-.074	1781	0	- 2
1.053	.07	.06	.006	-.01	.26	-.266	1782	0	0
1.052	0.00	-.03	.027	1.98	2.37	-.384	1783	0	2
1.054	-.06	0.00	-.051	4.02	4.56	-.538	1784	0	4
1.052	-.07	.02	-.084	6.03	6.75	-.699	1785	0	6
1.051	-.07	-.02	-.046	8.08	8.99	-.909	1786	0	8
1.052	-.07	-.07	.001	10.11	11.13	-1.022	1787	0	10
1.052	-.07	-.01	-.060	11.09	12.17	-1.077	1788	0	11
1.054	.07	.05	.020	0.00	.24	-.243	1789	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.05 182 5 0 2.76 76.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.055	-.96	-1.02	.062	-1.98	-1.97	-.013	1790	- 1	- 2
1.055	-.93	-1.02	.093	-.01	.24	-.243	1791	- 1	0
1.053	-1.02	-1.13	.106	2.01	2.38	-.374	1792	- 1	2
1.055	-1.07	-1.10	.029	4.04	4.56	-.513	1793	- 1	4
1.051	-1.08	-1.11	.030	6.08	6.83	-.748	1794	- 1	6
1.051	-1.08	-1.12	.043	8.06	9.03	-.974	1795	- 1	8
1.051	-1.07	-1.18	.110	9.99	11.14	-1.150	1796	- 1	10
1.052	-.93	-1.04	.105	-.01	.23	-.239	1797	- 1	0

MREF RUN CONF PHI REYN TT8F
1.05 183 5 0 2.76 77.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.053	-1.95	-2.11	.159	-2.01	-1.99	-.025	1798	- 2	- 2
1.053	-1.93	-2.09	.158	-.01	.25	-.257	1799	- 2	0
1.053	-2.03	-2.20	.179	2.00	2.39	-.390	1800	- 2	2
1.052	-2.07	-2.18	.107	4.04	4.61	-.566	1801	- 2	4
1.052	-2.07	-2.17	.095	6.09	6.82	-.731	1802	- 2	6
1.053	-2.07	-2.19	.123	8.12	9.06	-.943	1803	- 2	8
1.054	-2.07	-2.21	.137	8.83	9.79	-.957	1804	- 2	9
1.053	-1.93	-2.10	.168	0.00	.26	-.264	1805	- 2	0

MREF RUN CONF PHI REYN TT8F
1.05 184 5 0 2.76 77.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.055	4.09	4.32	-.229	.05	.30	-.248	1806	4	0
1.054	2.08	2.17	-.096	.02	.27	-.253	1807	2	0
1.053	.07	.06	.009	-.01	.23	-.238	1808	0	0
1.051	-1.93	-2.06	.148	-.01	.22	-.225	1809	- 2	0
1.049	.07	.05	.019	-.01	.22	-.228	1810	0	0

MREF RUN CONF PHI REYN TT8F
1.10 11 1 0 2.88 84.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.141	.08	.01	.067	.06	.26	-.205	104	0	0
1.100	4.10	4.31	-.207	.12	.31	-.191	105	4	0
1.101	2.08	2.16	-.074	.08	.29	-.210	106	2	0
1.102	1.07	1.08	-.012	.08	.25	-.169	107	1	0
1.101	.08	.06	.021	.06	.25	-.190	108	0	0
1.100	-.92	-1.02	.101	.06	.23	-.171	109	- 1	0
1.101	-1.92	-2.08	.160	.05	.25	-.195	110	- 2	0
1.101	-2.94	-3.18	.241	.05	.28	-.228	111	- 3	0
1.105	.08	.02	.057	.05	.25	-.193	112	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 12 1 0 2.88 84.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.101	.07	0.00	.066	-1.93	-1.99	.060	113	0	- 2
1.103	.08	.04	.040	.05	.22	-.167	114	0	0
1.104	.01	-.08	.090	2.05	2.42	-.372	115	0	2
1.105	-.04	-.04	-.003	4.08	4.62	-.542	116	0	4
1.102	-.05	-.02	-.027	6.11	6.79	-.679	117	0	6
1.101	-.05	-.05	-.007	8.14	8.99	-.850	118	0	8
1.101	-.06	-.10	.039	10.16	11.11	-.958	119	0	10
1.099	-.06	-.04	-.017	11.12	12.14	-1.023	120	0	11
1.101	.08	.02	.058	.06	.26	-.199	121	0	0

MREF RUN CONF PHI REYN TT8F
1.10 36 2 1 2.94 77.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.103	-.08	-.11	.036	.17	.48	-.305	357	0	0
1.102	-3.08	-3.30	.217	.13	.50	-.370	358	- 3	0
1.102	-2.08	-2.25	.171	.15	.50	-.354	359	- 2	0
1.102	-1.08	-1.18	.102	.15	.51	-.363	360	- 1	0
1.102	-.08	-.11	.026	.17	.52	-.347	361	0	0
1.101	.92	.95	-.028	.17	.51	-.337	362	1	0
1.100	1.92	2.03	-.101	.17	.53	-.357	363	2	0
1.101	2.94	3.10	-.154	.18	.54	-.363	364	3	0
1.101	-.08	-.11	.034	.18	.52	-.344	365	0	0

MREF RUN CONF PHI REYN TT8F
1.10 37 2 1 2.93 77.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.101	-.07	-.12	.054	2.16	2.72	-.556	366	0	2
1.103	-.08	-.09	.016	.18	.52	-.347	367	0	0
1.102	-.01	-.02	.007	-1.83	-1.70	-.130	368	0	- 2
1.101	.04	-.05	.089	-3.85	-3.91	.054	369	0	- 4
1.102	.05	-.05	.099	-5.89	-6.09	.204	370	0	- 6
1.101	.06	0.00	.057	-7.91	-8.32	.410	371	0	- 8
1.101	.06	.08	-.021	-9.93	-10.46	.533	372	0	-10
1.100	.06	.06	.003	-10.80	-11.35	.552	373	0	-11
1.099	-.08	-.10	.020	.17	.45	-.277	374	0	0

MREF RUN CONF PHI REYN TT8F
1.10 52 3 10 2.89 84.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.101	.16	.04	.123	.08	.25	-.172	509	0	0
1.102	.11	0.00	.119	12.23	13.32	-1.087	510	0	12
1.101	.22	0.00	.216	10.17	11.14	-.973	511	0	10
1.101	.09	-.02	.111	8.12	8.96	-.836	512	0	8
1.101	.10	0.00	.107	6.10	6.72	-.613	513	0	6
1.101	.10	.01	.091	4.10	4.62	-.523	514	0	4
1.103	.14	.03	.106	2.08	2.44	-.358	515	0	2
1.102	.16	.05	.115	.08	.26	-.173	516	0	0
1.102	.16	.06	.105	-1.93	-1.98	.055	517	0	- 2

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 64 4 11 2.89 84.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.101	-.02	-.27	.243	-.08	.12	-.197	628	0	0
1.102	.03	-.22	.250	-12.24	-13.02	.784	629	0	-12
1.102	-.08	-.23	.148	-10.17	-10.83	.663	630	0	-10
1.101	.04	-.22	.256	-8.13	-8.63	.505	631	0	-8
1.104	.03	-.22	.255	-6.11	-6.45	.344	632	0	-6
1.101	.04	-.23	.270	-4.10	-4.31	.205	633	0	-4
1.102	0.00	-.25	.255	-2.09	-2.14	.052	634	0	-2
1.102	-.02	-.26	.234	-.08	.10	-.178	635	0	0
1.101	-.02	-.26	.232	1.92	2.29	-.367	636	0	2

MREF RUN CONF PHI REYN TT8F
1.10 74 5 0 2.89 83.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.104	24.93	27.11	-2.187	.04	.09	-.044	744	25	0
1.101	22.28	24.27	-1.988	.05	.30	-.251	745	22	0
1.107	20.32	22.13	-1.815	.04	.29	-.250	746	20	0
1.104	18.33	19.87	-1.544	.05	.29	-.233	747	18	0
1.104	16.30	17.70	-1.406	.06	.28	-.219	748	16	0
1.098	14.30	15.47	-1.166	.06	.32	-.252	749	14	0
1.100	12.27	13.26	-.987	.05	.25	-.204	750	12	0
1.105	10.22	10.98	-.762	-.07	.24	-.307	751	10	0
1.101	8.17	8.76	-.591	.06	.31	-.249	752	8	0
1.103	6.15	6.57	-.424	.05	.31	-.259	753	6	0
1.103	4.14	4.38	-.243	.05	.30	-.252	754	4	0
1.106	2.12	2.23	-.107	.02	.27	-.252	755	2	0
1.101	1.12	1.16	-.039	.02	.26	-.238	756	1	0
1.106	.12	.09	.026	-.01	.23	-.237	757	0	0
1.102	-.88	-.97	.093	-.01	.24	-.252	758	-1	0
1.101	-1.88	-2.02	.140	-.01	.26	-.263	759	-2	0
1.103	-2.90	-3.15	.256	-.01	.27	-.276	760	-3	0
1.102	2.13	2.22	-.096	.02	.28	-.257	761	2	0
1.102	.12	.09	.027	-.01	.24	-.250	762	0	0

MREF RUN CONF PHI REYN TT8F
1.10 220 5 0 2.92 78.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.102	4.10	4.34	-.242	.05	.28	-.228	2120	4	0
1.100	2.09	2.19	-.099	.02	.27	-.245	2121	2	0
1.101	.07	.05	.024	-.01	.22	-.230	2122	0	0
1.101	-1.92	-2.09	.168	-.01	.25	-.255	2123	-2	0
1.101	.08	.08	.001	-.01	.23	-.239	2124	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 221 5 0 2.91 79.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.098	22.26	24.20	-1.939	-1.95	-1.99	.037	2125	22	- 2
1.093	22.24	24.15	-1.909	.04	.32	-.272	2126	22	0
1.104	22.19	24.09	-1.901	2.07	2.37	-.300	2127	22	2
1.098	22.12	24.06	-1.934	4.10	4.62	-.519	2128	22	4
1.106	22.10	24.05	-1.950	6.13	6.89	-.762	2129	22	6
1.102	22.07	23.95	-1.884	8.13	9.27	-1.144	2130	22	8
1.101	22.06	23.90	-1.841	8.68	9.97	-1.295	2131	22	9
1.101	22.24	24.22	-1.980	.05	.35	-.295	2132	22	0

MREF RUN CONF PHI REYN TT8F
1.10 222 5 0 2.91 81.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.104	20.25	22.02	-1.771	-1.94	-2.00	.060	2133	20	- 2
1.100	20.28	22.02	-1.736	.05	.30	-.255	2134	20	0
1.098	20.17	21.88	-1.714	2.07	2.51	-.439	2135	20	2
1.099	20.11	21.82	-1.709	4.09	4.72	-.633	2136	20	4
1.100	20.08	21.86	-1.771	6.10	6.95	-.847	2137	20	6
1.100	20.05	21.74	-1.685	8.12	9.36	-1.236	2138	20	8
1.099	20.02	21.52	-1.504	10.15	11.59	-1.444	2139	20	10
1.106	20.00	21.55	-1.542	10.99	12.39	-1.395	2140	20	11
1.098	20.28	22.04	-1.759	.05	.33	-.276	2141	20	0

MREF RUN CONF PHI REYN TT8F
1.10 223 5 0 2.91 80.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.106	18.26	19.82	-1.556	-1.97	-2.11	.147	2142	18	- 2
1.097	18.28	19.81	-1.524	.06	.26	-.195	2143	18	0
1.103	18.15	19.69	-1.535	2.09	2.55	-.454	2144	18	2
1.104	18.10	19.66	-1.563	4.11	4.85	-.740	2145	18	4
1.106	18.07	19.65	-1.574	6.10	7.06	-.956	2146	18	6
1.105	18.04	19.57	-1.527	8.12	9.38	-1.263	2147	18	8
1.106	18.00	19.42	-1.423	10.14	11.53	-1.389	2148	18	10
1.105	17.96	19.36	-1.394	12.16	13.70	-1.538	2149	18	12
1.100	18.29	19.88	-1.594	.06	.30	-.245	2150	18	0

MREF RUN CONF PHI REYN TT8F
1.10 224 5 0 2.90 81.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.103	16.23	17.57	-1.343	-1.98	-2.10	.123	2151	16	- 2
1.101	16.25	17.61	-1.363	.06	.27	-.207	2152	16	0
1.101	16.18	17.53	-1.350	2.10	2.50	-.402	2153	16	2
1.101	16.09	17.41	-1.320	4.10	4.72	-.624	2154	16	4
1.100	16.03	17.40	-1.368	6.10	7.03	-.923	2155	16	6
1.102	16.00	17.34	-1.341	8.12	9.36	-1.243	2156	16	8
1.101	15.98	17.21	-1.235	10.14	11.60	-1.459	2157	16	10
1.104	15.95	17.20	-1.253	12.15	13.64	-1.488	2158	16	12
1.102	16.25	17.64	-1.392	.06	.30	-.234	2159	16	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 225 5 0 2.90 82.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.102	14.19	15.37	-1.182	-1.97	-2.01	.037	2160	14	- 2
1.102	14.26	15.41	-1.143	.06	.30	-.234	2161	14	0
1.101	14.14	15.24	-1.103	2.11	2.54	-.425	2162	14	2
1.102	14.07	15.23	-1.163	4.11	4.75	-.643	2163	14	4
1.102	14.03	15.19	-1.160	6.11	6.94	-.828	2164	14	6
1.104	14.00	15.15	-1.156	8.11	9.23	-1.115	2165	14	8
1.101	13.97	15.07	-1.101	10.13	11.37	-1.241	2166	14	10
1.101	13.93	15.01	-1.074	12.14	13.57	-1.423	2167	14	12
1.103	14.26	15.43	-1.166	.07	.34	-.278	2168	14	0

MREF RUN CONF PHI REYN TT8F
1.10 226 5 0 2.90 81.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.100	12.18	13.15	-.970	-1.97	-2.05	.087	2169	12	- 2
1.101	12.23	13.17	-.936	.05	.22	-.176	2170	12	0
1.100	12.06	12.98	-.919	2.10	2.45	-.356	2171	12	2
1.099	12.02	12.98	-.960	4.12	4.65	-.536	2172	12	4
1.100	12.01	12.98	-.964	6.14	6.94	-.800	2173	12	6
1.101	11.99	12.97	-.973	8.13	9.16	-1.021	2174	12	8
1.099	11.97	12.87	-.893	10.13	11.30	-1.168	2175	12	10
1.100	11.95	12.84	-.890	12.13	13.52	-1.390	2176	12	12
1.098	12.23	13.22	-.984	.05	.28	-.233	2177	12	0

MREF RUN CONF PHI REYN TT8F
1.10 227 5 0 2.90 82.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.104	10.13	10.84	-.705	-2.09	-2.16	.073	2178	10	- 2
1.104	10.12	10.83	-.704	-.07	.11	-.176	2179	10	0
1.103	10.06	10.73	-.667	1.97	2.35	-.382	2180	10	2
1.102	10.01	10.71	-.702	3.98	4.60	-.619	2181	10	4
1.102	10.00	10.70	-.702	6.00	6.82	-.817	2182	10	6
1.104	9.98	10.65	-.671	7.99	8.99	-1.007	2183	10	8
1.102	9.96	10.57	-.615	9.98	11.08	-1.100	2184	10	10
1.105	9.93	10.57	-.638	11.98	13.23	-1.255	2185	10	12
1.099	10.12	10.75	-.633	-.07	.19	-.262	2186	10	0

MREF RUN CONF PHI REYN TT8F
1.10 228 5 0 2.90 82.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.101	8.14	8.68	-.546	-1.85	-1.83	-.015	2187	8	- 2
1.101	8.13	8.67	-.541	.06	.30	-.234	2188	8	0
1.101	8.12	8.64	-.527	1.96	2.37	-.408	2189	8	2
1.104	8.04	8.60	-.565	3.99	4.60	-.615	2190	8	4
1.106	8.00	8.62	-.618	6.01	6.81	-.801	2191	8	6
1.101	7.97	8.58	-.609	8.00	8.97	-.964	2192	8	8
1.103	7.95	8.50	-.545	10.00	11.11	-1.110	2193	8	10
1.105	7.93	8.47	-.541	11.99	13.25	-1.266	2194	8	12
1.102	8.13	8.68	-.556	.06	.31	-.247	2195	8	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 229 5 0 2.90 82.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.102	6.11	6.52	-.408	-1.91	-1.92	.010	2196	6	- 2
1.103	6.11	6.50	-.392	.05	.31	-.257	2197	6	0
1.102	6.12	6.50	-.381	2.01	2.45	-.445	2198	6	2
1.101	6.05	6.48	-.433	4.01	4.56	-.552	2199	6	4
1.102	6.01	6.48	-.466	6.00	6.77	-.771	2200	6	6
1.105	6.00	6.41	-.409	8.01	8.92	-.913	2201	6	8
1.104	5.99	6.33	-.330	10.02	11.07	-1.047	2202	6	10
1.104	5.99	6.40	-.409	12.03	13.30	-1.266	2203	6	12
1.103	6.11	6.50	-.394	.06	.34	-.286	2204	6	0

MREF RUN CONF PHI REYN TT8F
1.10 230 5 0 2.89 83.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.104	4.08	4.31	-.223	-1.93	-1.93	-.006	2205	4	- 2
1.104	4.10	4.32	-.221	.05	.28	-.228	2206	4	0
1.103	4.05	4.23	-.184	2.02	2.44	-.425	2207	4	2
1.103	4.02	4.33	-.309	4.02	4.58	-.564	2208	4	4
1.104	4.03	4.34	-.308	6.01	6.77	-.756	2209	4	6
1.105	4.02	4.27	-.247	8.03	8.93	-.894	2210	4	8
1.105	4.01	4.21	-.202	10.06	11.11	-1.055	2211	4	10
1.106	3.99	4.28	-.291	12.08	13.28	-1.207	2212	4	12
1.103	4.10	4.32	-.214	.05	.30	-.246	2213	4	0

MREF RUN CONF PHI REYN TT8F
1.10 231 5 0 2.89 83.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.103	2.07	2.19	-.115	-1.93	-1.94	.011	2214	2	- 2
1.102	2.08	2.19	-.109	.02	.28	-.261	2215	2	0
1.104	2.05	2.14	-.088	1.99	2.43	-.434	2216	2	2
1.104	1.98	2.15	-.168	4.00	4.60	-.592	2217	2	4
1.102	1.95	2.12	-.172	6.02	6.77	-.750	2218	2	6
1.104	1.96	2.08	-.126	8.04	8.98	-.933	2219	2	8
1.103	1.96	2.05	-.085	10.07	11.11	-1.040	2220	2	10
1.102	1.97	2.19	-.223	12.11	13.27	-1.162	2221	2	12
1.099	2.08	2.18	-.097	.02	.30	-.281	2222	2	0

MREF RUN CONF PHI REYN TT8F
1.10 232 5 0 2.89 83.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.102	1.08	1.15	-.069	-1.94	-1.97	.028	2223	1	- 2
1.099	1.08	1.12	-.040	.02	.26	-.242	2224	1	0
1.102	1.02	1.06	-.038	2.00	2.42	-.423	2225	1	2
1.103	.97	1.08	-.108	4.01	4.61	-.603	2226	1	4
1.103	.96	1.07	-.116	6.02	6.80	-.781	2227	1	6
1.101	.96	1.05	-.088	8.05	8.97	-.918	2228	1	8
1.102	.96	1.02	-.069	10.08	11.09	-1.015	2229	1	10
1.103	.96	1.11	-.153	11.88	13.05	-1.163	2230	1	12
1.104	1.08	1.12	-.034	.02	.24	-.221	2231	1	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.10 233 5 0 2.89 83.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.103	.07	.06	.009	-1.99	-2.01	.022	2232	0	- 2
1.103	.08	.06	.014	0.00	.22	-.228	2233	0	0
1.101	.01	-.02	.029	2.00	2.43	-.434	2234	0	2
1.103	-.04	0.00	-.043	4.02	4.63	-.604	2235	0	4
1.101	-.05	.02	-.071	6.06	6.78	-.716	2236	0	6
1.102	-.06	-.02	-.038	8.08	8.99	-.918	2237	0	8
1.103	-.06	-.06	.004	10.10	11.10	-.997	2238	0	10
1.103	-.06	-.03	-.035	11.05	12.10	-1.052	2239	0	11
1.101	.08	.08	.001	0.00	.24	-.242	2240	0	0

MREF RUN CONF PHI REYN TT8F
1.10 234 5 0 2.88 84.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.102	-.95	-1.01	.064	-1.98	-2.05	.074	2241	- 1	- 2
1.101	-.92	-.98	.062	-.01	.23	-.237	2242	- 1	0
1.101	-1.01	-1.10	.092	2.02	2.46	-.435	2243	- 1	2
1.101	-1.06	-1.10	.044	4.04	4.63	-.593	2244	- 1	4
1.101	-1.07	-1.08	.013	6.07	6.83	-.757	2245	- 1	6
1.101	-1.06	-1.09	.031	8.06	9.05	-.989	2246	- 1	8
1.102	-1.06	-1.16	.100	9.98	11.07	-1.090	2247	- 1	10
1.101	-.92	-1.02	.098	-.01	.25	-.263	2248	- 1	0

MREF RUN CONF PHI REYN TT8F
1.10 235 5 0 2.87 85.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.100	-1.94	-2.08	.147	-2.01	-2.08	.069	2249	- 2	- 2
1.100	-1.92	-2.05	.126	-.01	.25	-.262	2250	- 2	0
1.097	-2.01	-2.18	.164	1.99	2.46	-.466	2251	- 2	2
1.100	-2.05	-2.16	.112	4.05	4.67	-.623	2252	- 2	4
1.101	-2.06	-2.14	.089	6.10	6.89	-.793	2253	- 2	6
1.098	-2.05	-2.16	.108	8.12	9.10	-.982	2254	- 2	8
1.102	-2.05	-2.19	.136	8.83	9.83	-.997	2255	- 2	9
1.099	-1.92	-2.07	.153	-.01	.28	-.290	2256	- 2	0

MREF RUN CONF PHI REYN TT8F
1.10 236 5 0 2.87 85.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.100	4.10	4.32	-.225	.05	.31	-.253	2257	4	0
1.101	2.08	2.19	-.108	.02	.28	-.263	2258	2	0
1.101	.08	.08	-.005	-.01	.24	-.248	2259	0	0
1.099	-1.92	-2.06	.132	-.01	.26	-.267	2260	- 2	0
1.101	.08	.08	.003	-.01	.23	-.239	2261	0	0

FIGURE 17 SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 13 1 0 3.26 90.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.197	.07	-.01	.079	0.00	.23	-.230	122	0	0
1.199	4.09	4.28	-.189	.06	.25	-.194	123	4	0
1.199	2.07	2.15	-.075	.02	.21	-.185	124	2	0
1.200	1.07	1.07	.001	.02	.20	-.178	125	1	0
1.198	.07	.04	.034	0.00	.19	-.194	126	0	0
1.197	-.93	-1.03	.106	0.00	.19	-.190	127	- 1	0
1.198	-1.93	-2.09	.161	0.00	.22	-.223	128	- 2	0
1.200	-2.95	-3.16	.212	0.00	.23	-.237	129	- 3	0
1.201	.07	.01	.057	0.00	.20	-.202	130	0	0

MREF RUN CONF PHI REYN TT8F
1.20 14 1 0 3.26 91.4

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.201	.06	0.00	.056	-2.02	-2.04	.013	131	0	- 2
1.200	.07	.01	.058	-.01	.17	-.179	132	0	0
1.199	.01	-.07	.080	1.99	2.39	-.395	133	0	2
1.199	-.03	-.06	.030	4.03	4.59	-.559	134	0	4
1.197	-.06	-.06	.002	6.06	6.72	-.660	135	0	6
1.195	-.07	-.06	-.009	8.09	9.03	-.938	136	0	8
1.196	-.09	-.12	.035	10.11	11.18	-1.063	137	0	10
1.197	-.10	-.09	-.004	11.08	12.26	-1.178	138	0	11
1.200	.07	.01	.058	-.01	.19	-.192	139	0	0

MREF RUN CONF PHI REYN TT8F
1.20 38 2 1 3.32 83.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.200	-.07	-.10	.034	.24	.52	-.288	375	0	0
1.200	-3.08	-3.28	.196	.19	.51	-.318	376	- 3	0
1.201	-2.07	-2.24	.164	.21	.55	-.340	377	- 2	0
1.200	-1.07	-1.17	.101	.21	.54	-.329	378	- 1	0
1.199	-.07	-.11	.041	.24	.55	-.313	379	0	0
1.199	.93	.95	-.017	.24	.55	-.316	380	1	0
1.200	1.94	2.01	-.077	.24	.55	-.315	381	2	0
1.198	2.95	3.08	-.133	.23	.56	-.326	382	3	0
1.201	-.07	-.10	.035	.24	.54	-.304	383	0	0

MREF RUN CONF PHI REYN TT8F
1.20 39 2 1 3.32 83.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.198	-.06	-.09	.036	2.25	2.75	-.497	384	0	2
1.200	-.07	-.10	.030	.24	.57	-.327	385	0	0
1.200	-.02	0.00	-.012	-1.77	-1.67	-.093	386	0	- 2
1.198	.03	.01	.025	-3.80	-3.90	.100	387	0	- 4
1.198	.06	0.00	.056	-5.83	-6.04	.206	388	0	- 6
1.200	.07	.02	.050	-7.85	-8.38	.522	389	0	- 8
1.202	.09	.10	-.013	-9.88	-10.58	.705	390	0	-10
1.202	.10	.10	-.006	-10.73	-11.52	.788	391	0	-11
1.201	-.07	-.09	.021	.24	.55	-.310	392	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 51 3 10 3.29 86.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.199	.22	-.03	.253	.07	.28	-.203	500	0	0
1.200	.18	-.03	.204	12.24	13.52	-1.282	501	0	12
1.195	.28	-.02	.300	10.17	11.28	-1.112	502	0	10
1.199	.15	-.02	.177	8.12	9.00	-.882	503	0	8
1.199	.16	-.02	.182	6.09	6.84	-.743	504	0	6
1.202	.16	-.02	.183	4.09	4.68	-.598	505	0	4
1.199	.20	-.03	.226	2.07	2.45	-.385	506	0	2
1.204	.22	.03	.196	.07	.27	-.203	507	0	0
1.197	.22	.04	.188	-1.94	-1.96	.021	508	0	-2

MREF RUN CONF PHI REYN TT8F
1.20 63 4 11 3.29 87.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.203	-.08	-.23	.144	-.07	.14	-.208	618	0	0
1.199	-.03	-.22	.187	-12.24	-13.21	.973	619	0	-12
1.200	-.14	-.22	.074	-10.17	-10.95	.780	620	0	-10
1.199	-.02	-.19	.175	-8.12	-8.69	.563	621	0	-8
1.199	-.02	-.18	.161	-6.10	-6.50	.403	622	0	-6
1.198	-.02	-.20	.174	-4.09	-4.32	.231	623	0	-4
1.198	-.06	-.21	.151	-2.08	-2.13	.050	624	0	-2
1.199	-.08	-.22	.133	-.07	.11	-.178	625	0	0
1.202	-.08	-.22	.136	1.93	2.29	-.353	626	0	2

MREF RUN CONF PHI REYN TT8F
1.20 73 5 0 3.30 85.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.199	24.93	27.35	-2.415	-.01	.07	-.083	725	25	0
1.203	22.30	24.48	-2.184	-.01	.17	-.183	726	22	0
1.201	20.33	22.26	-1.932	-.01	.18	-.194	727	20	0
1.200	18.34	20.01	-1.674	0.00	.16	-.165	728	18	0
1.202	16.29	17.73	-1.435	0.00	.15	-.144	729	16	0
1.203	14.30	15.51	-1.210	.01	.16	-.152	730	14	0
1.205	12.27	13.27	-1.001	-.01	.16	-.172	731	12	0
1.202	10.21	11.02	-.814	-.12	.16	-.282	732	10	0
1.203	8.16	8.76	-.594	0.00	.28	-.279	733	8	0
1.199	6.14	6.57	-.425	-.01	.29	-.294	734	6	0
1.200	4.13	4.40	-.264	-.01	.27	-.282	735	4	0
1.201	2.12	2.22	-.105	-.04	.24	-.276	736	2	0
1.201	1.11	1.14	-.036	-.04	.21	-.250	737	1	0
1.199	.11	.10	.008	-.07	.20	-.270	738	0	0
1.198	-.89	-.98	.088	-.07	.20	-.263	739	-1	0
1.199	-1.89	-2.04	.146	-.07	.22	-.291	740	-2	0
1.201	-2.91	-3.14	.226	-.07	.21	-.276	741	-3	0
1.200	2.12	2.22	-.105	-.04	.23	-.272	742	2	0
1.199	.11	.09	.022	-.07	.19	-.260	743	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 203 5 0 3.25 91.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.194	4.09	4.27	-.173	0.00	.27	-.276	1972	4	0
1.202	2.08	2.13	-.057	-.04	.22	-.261	1973	2	0
1.200	.07	.03	.039	-.07	.21	-.275	1974	0	0
1.193	-1.93	-2.09	.153	-.06	.22	-.281	1975	- 2	0
1.199	.07	.04	.026	-.07	.21	-.279	1976	0	0

MREF RUN CONF PHI REYN TT8F
1.20 204 5 0 3.25 92.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.198	22.28	24.28	-2.008	-2.04	-1.95	-.086	1977	22	- 2
1.197	22.26	24.31	-2.049	-.01	.16	-.169	1978	22	0
1.198	22.22	24.19	-1.965	2.01	2.16	-.151	1979	22	2
1.197	22.16	24.12	-1.964	4.04	4.26	-.218	1980	22	4
1.199	22.12	24.17	-2.043	6.08	6.47	-.392	1981	22	6
1.199	22.08	24.05	-1.974	8.07	8.82	-.745	1982	22	8
1.199	22.06	24.07	-2.011	8.61	9.46	-.855	1983	22	9
1.201	22.26	24.37	-2.115	-.01	.22	-.227	1984	22	0

MREF RUN CONF PHI REYN TT8F
1.20 205 5 0 3.26 90.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.197	20.26	22.16	-1.903	-2.03	-1.94	-.088	1985	20	- 2
1.197	20.30	22.09	-1.797	-.01	.18	-.184	1986	20	0
1.198	20.20	22.01	-1.810	2.02	2.17	-.156	1987	20	2
1.197	20.14	21.99	-1.855	4.04	4.31	-.274	1988	20	4
1.200	20.10	22.04	-1.937	6.05	6.43	-.386	1989	20	6
1.201	20.05	21.83	-1.771	8.07	8.77	-.708	1990	20	8
1.201	20.01	21.72	-1.712	10.09	11.14	-1.053	1991	20	10
1.200	19.99	21.66	-1.671	10.92	11.94	-1.022	1992	20	11
1.201	20.29	22.18	-1.884	-.01	.22	-.226	1993	20	0

MREF RUN CONF PHI REYN TT8F
1.20 206 5 0 3.26 90.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.198	18.28	19.89	-1.619	-2.05	-2.00	-.043	1994	18	- 2
1.200	18.30	19.93	-1.632	0.00	.22	-.217	1995	18	0
1.200	18.18	19.75	-1.569	2.03	2.27	-.240	1996	18	2
1.199	18.12	19.76	-1.634	4.04	4.45	-.408	1997	18	4
1.198	18.09	19.78	-1.685	6.05	6.59	-.541	1998	18	6
1.200	18.04	19.67	-1.627	8.06	8.93	-.867	1999	18	8
1.199	17.99	19.56	-1.565	10.09	11.15	-1.057	2000	18	10
1.200	17.94	19.45	-1.512	12.11	13.29	-1.176	2001	18	12
1.203	18.29	19.95	-1.659	0.00	.25	-.246	2002	18	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 207 5 0 3.27 89.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.197	16.24	17.62	-1.386	-2.06	-1.98	-.077	2003	16	- 2
1.199	16.26	17.65	-1.393	.01	.13	-.127	2004	16	0
1.201	16.20	17.59	-1.387	2.05	2.29	-.240	2005	16	2
1.200	16.11	17.50	-1.387	4.05	4.42	-.378	2006	16	4
1.198	16.04	17.50	-1.460	6.05	6.75	-.704	2007	16	6
1.199	16.00	17.43	-1.427	8.06	9.07	-1.006	2008	16	8
1.202	15.96	17.41	-1.445	10.08	11.19	-1.106	2009	16	10
1.201	15.92	17.32	-1.399	12.10	13.34	-1.235	2010	16	12
1.202	16.26	17.67	-1.409	0.00	.17	-.162	2011	16	0

MREF RUN CONF PHI REYN TT8F
1.20 208 5 0 3.26 90.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.202	14.18	15.39	-1.207	-2.05	-2.09	.041	2012	14	- 2
1.200	14.26	15.43	-1.166	0.00	.15	-.149	2013	14	0
1.200	14.15	15.29	-1.133	2.05	2.41	-.352	2014	14	2
1.200	14.08	15.28	-1.197	4.06	4.60	-.545	2015	14	4
1.197	14.04	15.33	-1.295	6.05	6.89	-.838	2016	14	6
1.197	13.99	15.23	-1.242	8.06	9.10	-1.040	2017	14	8
1.200	13.94	15.15	-1.207	10.08	11.31	-1.235	2018	14	10
1.197	13.90	15.05	-1.149	12.10	13.41	-1.317	2019	14	12
1.200	14.26	15.47	-1.212	.01	.28	-.275	2020	14	0

MREF RUN CONF PHI REYN TT8F
1.20 209 5 0 3.28 88.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.199	12.18	13.18	-1.002	-2.06	-2.20	.142	2021	12	- 2
1.200	12.24	13.20	-.957	-.02	.13	-.145	2022	12	0
1.198	12.08	13.02	-.934	2.04	2.45	-.406	2023	12	2
1.199	12.04	13.03	-.991	4.06	4.70	-.639	2024	12	4
1.197	12.02	13.04	-1.012	6.08	7.05	-.971	2025	12	6
1.199	11.99	13.02	-1.025	8.08	9.28	-1.198	2026	12	8
1.199	11.96	12.90	-.946	10.08	11.35	-1.273	2027	12	10
1.197	11.93	12.88	-.950	12.08	13.53	-1.456	2028	12	12
1.199	12.24	13.22	-.984	-.01	.30	-.304	2029	12	0

MREF RUN CONF PHI REYN TT8F
1.20 210 5 0 3.27 89.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.201	10.13	10.87	-.739	-2.17	-2.28	.105	2030	10	- 2
1.200	10.12	10.82	-.695	-.13	.03	-.154	2031	10	0
1.199	10.08	10.75	-.670	1.91	2.46	-.553	2032	10	2
1.201	10.03	10.76	-.732	3.93	4.71	-.776	2033	10	4
1.205	10.01	10.80	-.790	5.94	6.99	-1.048	2034	10	6
1.201	9.97	10.77	-.796	7.93	9.16	-1.228	2035	10	8
1.197	9.94	10.64	-.700	9.93	11.30	-1.369	2036	10	10
1.197	9.90	10.64	-.740	11.93	13.40	-1.471	2037	10	12
1.205	10.12	10.77	-.656	-.13	.18	-.306	2038	10	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 211 5 0 3.27 89.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.203	8.13	8.76	-.633	-1.93	-1.94	.004	2039	8	- 2
1.200	8.13	8.72	-.596	0.00	.20	-.198	2040	8	0
1.197	8.13	8.71	-.580	1.91	2.38	-.472	2041	8	2
1.200	8.05	8.65	-.597	3.93	4.62	-.694	2042	8	4
1.200	8.00	8.67	-.672	5.96	6.89	-.929	2043	8	6
1.201	7.96	8.67	-.701	7.95	9.10	-1.146	2044	8	8
1.200	7.93	8.55	-.625	9.95	11.21	-1.270	2045	8	10
1.200	7.89	8.54	-.645	11.94	13.48	-1.538	2046	8	12
1.196	8.13	8.72	-.599	0.00	.30	-.302	2047	8	0

MREF RUN CONF PHI REYN TT8F
1.20 212 5 0 3.28 88.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.198	6.10	6.56	-.462	-2.00	-1.92	-.083	2048	6	- 2
1.200	6.10	6.52	-.420	-.01	.30	-.308	2049	6	0
1.200	6.13	6.54	-.410	1.96	2.43	-.470	2050	6	2
1.201	6.05	6.50	-.445	3.95	4.59	-.646	2051	6	4
1.201	6.01	6.51	-.509	5.95	6.83	-.876	2052	6	6
1.202	5.99	6.46	-.477	7.96	9.01	-1.050	2053	6	8
1.200	5.97	6.38	-.414	9.97	11.20	-1.228	2054	6	10
1.200	5.95	6.41	-.463	11.99	13.45	-1.468	2055	6	12
1.202	6.10	6.50	-.403	0.00	.33	-.335	2056	6	0

MREF RUN CONF PHI REYN TT8F
1.20 213 5 0 3.28 89.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.200	4.07	4.35	-.283	-2.02	-1.96	-.062	2057	4	- 2
1.200	4.09	4.32	-.230	.01	.29	-.289	2058	4	0
1.198	4.05	4.28	-.231	1.95	2.41	-.461	2059	4	2
1.198	4.03	4.34	-.310	3.96	4.56	-.600	2060	4	4
1.199	4.02	4.35	-.330	5.96	6.80	-.848	2061	4	6
1.199	4.00	4.31	-.312	7.98	9.04	-1.066	2062	4	8
1.201	3.97	4.23	-.259	10.01	11.25	-1.242	2063	4	10
1.203	3.95	4.29	-.341	12.04	13.47	-1.434	2064	4	12
1.201	4.09	4.33	-.243	-.01	.27	-.283	2065	4	0

MREF RUN CONF PHI REYN TT8F
1.20 214 5 0 3.28 88.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.202	2.06	2.20	-.136	-2.02	-1.95	-.069	2066	2	- 2
1.202	2.07	2.18	-.107	-.04	.24	-.280	2067	2	0
1.200	2.06	2.15	-.092	1.93	2.40	-.466	2068	2	2
1.199	1.99	2.16	-.161	3.95	4.55	-.598	2069	2	4
1.202	1.95	2.14	-.184	5.96	6.85	-.889	2070	2	6
1.202	1.95	2.10	-.158	7.99	9.00	-1.002	2071	2	8
1.199	1.94	2.05	-.113	10.02	11.22	-1.198	2072	2	10
1.202	1.93	2.17	-.234	12.06	13.41	-1.350	2073	2	12
1.200	2.08	2.17	-.095	-.04	.23	-.263	2074	2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 215 5 0 3.28 88.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.201	1.07	1.15	-.079	-2.03	-1.98	-.057	2075	1	- 2
1.201	1.07	1.11	-.037	-.04	.21	-.253	2076	1	0
1.200	1.03	1.07	-.041	1.94	2.41	-.475	2077	1	2
1.200	.98	1.07	-.086	3.95	4.55	-.602	2078	1	4
1.200	.95	1.08	-.130	5.96	6.83	-.869	2079	1	6
1.203	.94	1.07	-.128	8.00	8.97	-.972	2080	1	8
1.201	.93	1.03	-.099	10.02	11.18	-1.151	2081	1	10
1.200	.92	1.10	-.185	11.83	13.20	-1.364	2082	1	12
1.199	1.08	1.10	-.025	-.04	.21	-.251	2083	1	0

MREF RUN CONF PHI REYN TT8F
1.20 216 5 0 3.28 89.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.201	.06	.07	-.012	-2.08	-2.01	-.067	2084	0	- 2
1.202	.07	.05	.015	-.06	.21	-.276	2085	0	0
1.201	.01	-.01	.024	1.94	2.41	-.476	2086	0	2
1.200	-.03	.01	-.044	3.96	4.60	-.632	2087	0	4
1.198	-.05	0.00	-.054	6.00	6.80	-.801	2088	0	6
1.200	-.07	0.00	-.066	8.02	8.96	-.938	2089	0	8
1.204	-.09	-.07	-.020	10.05	11.13	-1.074	2090	0	10
1.202	-.09	-.05	-.045	11.00	12.28	-1.283	2091	0	11
1.199	.07	.06	.012	-.07	.21	-.275	2092	0	0

MREF RUN CONF PHI REYN TT8F
1.20 217 5 0 3.29 88.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.200	-.95	-1.01	.060	-2.07	-2.06	-.009	2093	- 1	- 2
1.200	-.93	-1.01	.077	-.06	.21	-.273	2094	- 1	0
1.202	-1.00	-1.11	.101	1.96	2.44	-.486	2095	- 1	2
1.200	-1.05	-1.12	.070	4.00	4.61	-.614	2096	- 1	4
1.200	-1.07	-1.08	.017	6.02	6.82	-.804	2097	- 1	6
1.201	-1.08	-1.10	.020	8.00	9.01	-1.004	2098	- 1	8
1.201	-1.09	-1.18	.089	9.93	11.19	-1.260	2099	- 1	10
1.200	-.93	-1.02	.089	-.06	.19	-.250	2100	- 1	0

MREF RUN CONF PHI REYN TT8F
1.20 218 5 0 3.29 87.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.199	-1.95	-2.10	.151	-2.10	-2.15	.053	2101	- 2	- 2
1.200	-1.93	-2.07	.138	-.07	.21	-.273	2102	- 2	0
1.199	-2.01	-2.19	.177	1.94	2.48	-.540	2103	- 2	2
1.200	-2.05	-2.20	.150	3.99	4.63	-.647	2104	- 2	4
1.200	-2.06	-2.17	.105	6.04	6.84	-.797	2105	- 2	6
1.199	-2.07	-2.18	.109	8.06	9.06	-.996	2106	- 2	8
1.199	-2.08	-2.20	.126	8.81	9.89	-1.083	2107	- 2	9
1.201	-1.94	-2.09	.153	-.06	.22	-.286	2108	- 2	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.20 219 5 0 3.28 88.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.200	4.09	4.33	-.240	-.01	.26	-.266	2109	4	0
1.201	2.07	2.17	-.102	-.04	.22	-.262	2110	2	0
1.200	.07	.06	.011	-.07	.20	-.265	2111	0	0
1.199	-1.93	-2.08	.150	-.07	.20	-.267	2112	- 2	0
1.199	.07	.06	.008	-.07	.19	-.260	2113	0	0

MREF RUN CONF PHI REYN TT8F
1.30 16 1 0 3.73 92.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.292	-.02	-.06	.038	.05	.24	-.190	157	0	0
1.293	4.01	4.18	-.174	.11	.16	-.054	158	4	0
1.295	1.99	2.03	-.045	.08	.29	-.212	159	2	0
1.294	.99	.99	-.002	.08	.25	-.172	160	1	0
1.293	-.02	-.07	.055	.05	.23	-.179	161	0	0
1.294	-1.02	-1.12	.105	.05	.20	-.153	162	- 1	0
1.294	-2.03	-2.18	.152	.05	.22	-.171	163	- 2	0
1.294	-3.03	-3.23	.195	.05	.23	-.185	164	- 3	0
1.294	-.02	-.06	.041	.05	.23	-.178	165	0	0

MREF RUN CONF PHI REYN TT8F
1.30 17 1 0 3.73 92.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.293	-.05	-.05	.006	-1.92	-1.92	0.000	166	0	- 2
1.291	-.02	-.06	.040	.05	.24	-.198	167	0	0
1.295	-.07	-.09	.021	2.07	2.41	-.335	168	0	2
1.296	-.10	-.12	.021	4.11	4.59	-.480	169	0	4

MREF RUN CONF PHI REYN TT8F
1.30 18 1 0 2.36 85.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.292	-.02	-.09	.071	.05	.26	-.220	171	0	0
1.292	4.00	4.14	-.141	.11	.38	-.272	172	4	0
1.293	1.98	2.02	-.037	.07	.28	-.206	173	2	0
1.295	-.03	-.08	.051	.05	.23	-.181	174	0	0
1.293	-1.01	-1.13	.113	.04	.24	-.192	175	- 1	0
1.294	-2.02	-2.18	.156	.05	.22	-.174	176	- 2	0
1.292	-3.04	-3.23	.199	.04	.24	-.193	177	- 3	0
1.292	.98	.97	.017	.07	.26	-.185	178	1	0
1.293	-.02	-.07	.058	.05	.26	-.214	179	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 19 1 0 3.73 92.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	-.04	-.06	.016	-1.92	-1.89	-.024	180	0	- 2
1.294	-.02	-.07	.057	.05	.23	-.183	181	0	0
1.294	-.06	-.10	.042	2.07	2.41	-.341	182	0	2
1.292	-.09	-.09	-.006	4.11	4.62	-.509	183	0	4
1.292	-.11	-.06	-.046	6.15	6.93	-.786	184	0	6
1.297	-.12	-.06	-.058	8.20	9.17	-.974	185	0	8
1.293	-.13	-.16	.031	10.21	11.30	-1.096	186	0	10
1.293	-.13	-.15	.013	11.21	12.39	-1.171	187	0	11
1.295	-.02	-.06	.047	.05	.21	-.164	188	0	0

MREF RUN CONF PHI REYN TT8F
1.30 40 2 1 3.78 86.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	.02	0.00	.029	.18	.46	-.287	393	0	0
1.294	-3.00	-3.21	.217	.13	.45	-.316	394	- 3	0
1.294	-1.99	-2.15	.160	.15	.48	-.329	395	- 2	0
1.294	-.98	-1.08	.094	.15	.48	-.332	396	- 1	0
1.295	.02	-.02	.040	.18	.52	-.346	397	0	0
1.295	1.02	1.02	-.003	.17	.55	-.376	398	1	0
1.294	2.03	2.10	-.066	.18	.57	-.396	399	2	0
1.295	3.05	3.17	-.120	.18	.60	-.424	400	3	0
1.297	.02	-.02	.042	.17	.52	-.347	401	0	0

MREF RUN CONF PHI REYN TT8F
1.30 41 2 1 3.78 87.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	.05	.03	.022	2.13	2.71	-.579	402	0	2
1.296	.02	-.02	.047	.17	.54	-.365	403	0	0
1.296	.06	.06	-.002	-1.84	-1.65	-.186	404	0	- 2
1.295	.10	.10	.002	-3.89	-3.88	-.015	405	0	- 4
1.296	.12	.05	.067	-5.92	-6.16	.241	406	0	- 6
1.295	.12	.09	.035	-7.95	-8.38	.425	407	0	- 8
1.295	.13	.17	-.040	-9.98	-10.55	.567	408	0	-10
1.296	.14	.17	-.032	-10.84	-11.53	.690	409	0	-11
1.296	.02	-.02	.042	.17	.53	-.357	410	0	0

MREF RUN CONF PHI REYN TT8F
1.30 43 2 1 2.36 86.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.295	.02	-.04	.059	.17	.51	-.341	421	0	0
1.295	-2.99	-3.20	.210	.13	.48	-.352	422	- 3	0
1.293	-1.98	-2.12	.134	.15	.49	-.343	423	- 2	0
1.293	-.98	-1.07	.089	.15	.51	-.360	424	- 1	0
1.294	.02	0.00	.022	.17	.53	-.354	425	0	0
1.295	1.02	1.03	-.012	.17	.54	-.367	426	1	0
1.293	2.02	2.11	-.088	.17	.57	-.393	427	2	0
1.296	3.04	3.17	-.125	.17	.58	-.413	428	3	0
1.295	.02	-.02	.045	.17	.51	-.343	429	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 49 3 10 2.41 77.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.290	.16	0.00	.160	-.02	.22	-.234	482	0	0
1.291	.12	0.00	.117	12.13	13.39	-1.255	483	0	12
1.291	.22	-.01	.227	10.07	11.22	-1.154	484	0	10
1.293	.09	-.02	.113	8.02	8.99	-.968	485	0	8
1.293	.10	0.00	.099	6.00	6.75	-.746	486	0	6
1.293	.11	0.00	.101	4.00	4.55	-.556	487	0	4
1.293	.14	.03	.106	1.98	2.36	-.376	488	0	2
1.292	.16	.02	.146	-.02	.22	-.236	489	0	0
1.294	.16	.03	.131	-2.04	-1.96	-.072	490	0	-2

MREF RUN CONF PHI REYN TT8F
1.30 50 3 10 3.78 87.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	.16	.01	.149	-.02	.21	-.228	491	0	0
1.298	.11	-.01	.126	12.15	13.47	-1.314	492	0	12
1.297	.21	-.03	.246	10.08	11.21	-1.132	493	0	10
1.295	.09	-.02	.116	8.03	8.97	-.936	494	0	8
1.294	.10	-.01	.117	6.01	6.77	-.762	495	0	6
1.295	.10	0.00	.104	4.00	4.59	-.593	496	0	4
1.295	.14	.03	.105	1.98	2.36	-.383	497	0	2
1.294	.16	.02	.145	-.03	.22	-.247	498	0	0
1.291	.16	.02	.147	-2.02	-1.94	-.082	499	0	-2

MREF RUN CONF PHI REYN TT8F
1.30 61 4 11 3.77 88.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.293	-.02	-.25	.228	.02	.13	-.117	600	0	0
1.294	.03	-.23	.262	-12.16	-13.18	1.029	601	0	-12
1.297	-.08	-.19	.113	-10.09	-10.92	.831	602	0	-10
1.295	.04	-.17	.214	-8.04	-8.67	.632	603	0	-8
1.296	.03	-.19	.223	-6.00	-6.46	.461	604	0	-6
1.297	.03	-.21	.241	-4.00	-4.24	.235	605	0	-4
1.297	0.00	-.22	.223	-1.99	-2.05	.064	606	0	-2
1.296	-.02	-.26	.233	.03	.14	-.117	607	0	0
1.296	-.03	-.22	.190	2.03	2.30	-.279	608	0	2

MREF RUN CONF PHI REYN TT8F
1.30 62 4 11 2.37 84.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	-.02	-.28	.258	.02	.14	-.111	609	0	0
1.295	.03	-.23	.263	-12.13	-13.13	.993	610	0	-12
1.296	-.08	-.22	.141	-10.07	-10.88	.805	611	0	-10
1.296	.04	-.20	.242	-8.02	-8.64	.613	612	0	-8
1.293	.03	-.20	.230	-6.00	-6.45	.452	613	0	-6
1.292	.03	-.20	.234	-4.00	-4.24	.245	614	0	-4
1.295	0.00	-.22	.222	-1.98	-2.05	.065	615	0	-2
1.297	-.02	-.26	.239	.02	.13	-.112	616	0	0
1.295	-.03	-.23	.204	2.03	2.29	-.263	617	0	2

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 72 5 0 2.41 77.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.301	24.80	27.06	-2.263	.05	.03	.022	707	25	0
1.300	22.16	24.20	-2.040	.05	.16	-.113	708	22	0
1.299	20.21	21.99	-1.782	.05	.23	-.183	709	20	0
1.297	18.21	19.78	-1.569	.06	.28	-.224	710	18	0
1.295	16.19	17.49	-1.302	.06	.29	-.228	711	16	0
1.297	14.18	15.30	-1.112	.07	.17	-.101	712	14	0
1.296	12.17	13.09	-.912	.05	.18	-.128	713	12	0
1.298	10.10	10.80	-.696	-.06	.18	-.239	714	10	0
1.297	8.07	8.62	-.552	.06	.17	-.109	715	8	0
1.300	6.04	6.45	-.410	.06	.14	-.079	716	6	0
1.295	4.04	4.25	-.210	.05	.41	-.354	717	4	0
1.295	2.02	2.08	-.051	.02	.32	-.294	718	2	0
1.293	1.02	1.02	.007	.02	.29	-.274	719	1	0
1.296	.01	-.04	.043	0.00	.26	-.259	720	0	0
1.294	-.98	-1.09	.114	-.01	.24	-.248	721	- 1	0
1.299	-2.00	-2.14	.140	0.00	.23	-.232	722	- 2	0
1.298	-3.00	-3.20	.205	0.00	.22	-.228	723	- 3	0
1.298	.02	.01	.014	0.00	.23	-.238	724	0	0

MREF RUN CONF PHI REYN TT8F
1.30 185 5 0 3.76 89.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	4.00	4.20	-.198	.05	.16	-.112	1811	4	0
1.294	1.98	2.06	-.075	.02	.29	-.274	1812	2	0
1.296	-.02	-.03	.010	-.01	.22	-.230	1813	0	0
1.295	-2.03	-2.15	.129	-.01	.20	-.213	1814	- 2	0
1.296	-.02	-.01	-.013	-.01	.23	-.239	1815	0	0

MREF RUN CONF PHI REYN TT8F
1.30 186 5 0 3.74 91.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	22.20	24.18	-1.987	-1.93	-1.98	.051	1816	22	- 2
1.296	22.19	24.17	-1.980	.04	.15	-.107	1817	22	0
1.296	22.17	24.15	-1.982	2.09	2.19	-.100	1818	22	2
1.294	22.12	24.06	-1.943	4.14	4.36	-.218	1819	22	4
1.297	22.09	24.13	-2.043	6.17	6.48	-.314	1820	22	6
1.294	22.05	24.19	-2.140	8.17	8.76	-.593	1822	22	8
1.295	22.04	24.15	-2.117	8.74	9.43	-.686	1823	22	9
1.297	22.19	24.23	-2.038	.05	.18	-.127	1824	22	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 187 5 0 3.74 91.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.297	20.17	22.04	-1.869	-1.91	-1.90	-.016	1825	20	- 2
1.296	20.22	22.05	-1.825	.05	.15	-.101	1826	20	0
1.294	20.14	22.00	-1.854	2.09	2.16	-.074	1827	20	2
1.295	20.09	21.93	-1.838	4.12	4.23	-.110	1828	20	4
1.293	20.06	22.00	-1.944	6.14	6.30	-.162	1829	20	6
1.295	20.02	21.91	-1.895	8.17	8.57	-.396	1830	20	8
1.297	20.02	22.01	-1.996	8.17	8.63	-.466	1831	20	8
1.296	19.98	21.74	-1.764	10.19	10.88	-.686	1832	20	10
1.296	19.96	21.71	-1.749	11.04	11.74	-.695	1833	20	11
1.295	20.22	22.05	-1.829	.04	.26	-.211	1834	20	0

MREF RUN CONF PHI REYN TT8F
1.30 188 5 0 3.72 93.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	18.19	19.79	-1.595	-1.94	-1.79	-.149	1835	18	- 2
1.297	18.22	19.75	-1.527	.06	.27	-.213	1836	18	0
1.296	18.12	19.72	-1.604	2.13	2.27	-.143	1837	18	2
1.296	18.07	19.65	-1.577	4.13	4.30	-.167	1838	18	4
1.295	18.05	19.73	-1.681	6.14	6.32	-.182	1839	18	6
1.295	18.01	19.74	-1.729	8.16	8.56	-.393	1840	18	8
1.295	17.96	19.52	-1.557	10.19	10.75	-.559	1841	18	10
1.294	17.92	19.46	-1.543	12.22	12.95	-.730	1842	18	12
1.296	18.22	19.79	-1.562	.06	.31	-.255	1843	18	0

MREF RUN CONF PHI REYN TT8F
1.30 189 5 0 3.74 90.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.295	16.15	17.50	-1.354	-1.95	-1.75	-.194	1844	16	- 2
1.297	16.18	17.45	-1.265	.06	.27	-.203	1845	16	0
1.296	16.14	17.44	-1.300	2.12	2.28	-.155	1846	16	2
1.295	16.06	17.35	-1.291	4.13	4.25	-.120	1847	16	4
1.296	16.00	17.45	-1.450	6.13	6.38	-.246	1848	16	6
1.294	15.97	17.38	-1.414	8.16	8.58	-.423	1849	16	8
1.296	15.93	17.33	-1.399	10.19	10.75	-.567	1850	16	10
1.296	15.90	17.27	-1.369	12.22	12.99	-.765	1851	16	12
1.295	16.18	17.52	-1.339	.06	.30	-.237	1852	16	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 190 5 0 3.74 91.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	14.09	15.25	-1.159	-1.94	-1.82	-.127	1853	14	- 2
1.294	14.19	15.25	-1.063	.06	.17	-.107	1854	14	0
1.295	14.09	15.17	-1.079	2.13	2.18	-.051	1855	14	2
1.295	14.03	15.14	-1.114	4.13	4.19	-.054	1856	14	4
1.293	13.99	15.17	-1.176	6.14	6.30	-.154	1857	14	6
1.295	13.95	15.14	-1.194	8.15	8.49	-.339	1858	14	8
1.295	13.91	15.07	-1.162	10.18	10.69	-.510	1859	14	10
1.295	13.87	15.04	-1.169	12.21	12.91	-.698	1860	14	12
1.294	14.18	15.27	-1.088	.06	.19	-.134	1861	14	0

MREF RUN CONF PHI REYN TT8F
1.30 191 5 0 3.73 92.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	12.08	13.01	-.926	-1.95	-1.89	-.053	1862	12	- 2
1.293	12.15	13.01	-.852	.04	.18	-.136	1863	12	0
1.296	12.01	12.85	-.839	2.12	2.25	-.136	1864	12	2
1.294	11.98	12.91	-.931	4.14	4.35	-.201	1865	12	4
1.293	11.97	12.94	-.972	6.19	6.56	-.378	1866	12	6
1.294	11.94	12.92	-.974	8.18	8.78	-.606	1867	12	8
1.294	11.92	12.83	-.918	10.18	11.05	-.877	1868	12	10
1.292	11.89	12.87	-.979	12.18	13.19	-1.007	1869	12	12
1.296	12.15	13.04	-.891	.04	.20	-.154	1870	12	0

MREF RUN CONF PHI REYN TT8F
1.30 192 5 0 3.73 92.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	10.03	10.70	-.665	-2.06	-2.17	.112	1871	10	- 2
1.297	10.04	10.67	-.635	-.06	.06	-.122	1872	10	0
1.297	10.01	10.63	-.628	1.99	2.26	-.272	1873	10	2
1.297	9.97	10.63	-.659	4.02	4.46	-.444	1874	10	4
1.296	9.95	10.66	-.710	6.03	6.82	-.792	1875	10	6
1.294	9.93	10.63	-.708	8.03	9.07	-1.037	1876	10	8
1.295	9.90	10.56	-.659	10.03	11.16	-1.132	1877	10	10
1.295	9.87	10.62	-.752	12.04	13.27	-1.232	1878	10	12
1.294	10.04	10.68	-.644	-.07	.11	-.181	1879	10	0

MREF RUN CONF PHI REYN TT8F
1.30 193 5 0 3.74 91.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.294	8.03	8.62	-.586	-1.83	-2.01	.185	1880	8	- 2
1.293	8.04	8.59	-.547	.06	.17	-.111	1881	8	0
1.295	8.05	8.57	-.516	1.98	2.33	-.346	1882	8	2
1.295	7.99	8.49	-.503	4.02	4.90	-.876	1883	8	4
1.294	7.94	8.57	-.631	6.05	7.12	-1.068	1884	8	6
1.294	7.91	8.57	-.656	8.05	9.33	-1.278	1885	8	8
1.295	7.88	8.49	-.610	10.05	11.36	-1.308	1886	8	10
1.294	7.86	8.46	-.605	12.04	13.46	-1.414	1887	8	12
1.294	8.04	8.57	-.536	.06	.18	-.116	1888	8	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 194 5 0 3.73 92.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	6.00	6.40	-.404	-1.89	-2.14	.254	1889	6	- 2
1.295	6.01	6.39	-.377	.05	.15	-.097	1890	6	0
1.295	6.05	6.45	-.403	2.03	2.72	-.693	1891	6	2
1.296	5.99	6.36	-.368	4.04	4.92	-.884	1892	6	4
1.296	5.95	6.45	-.499	6.04	7.17	-1.124	1893	6	6
1.296	5.94	6.41	-.474	8.06	9.37	-1.311	1894	6	8
1.295	5.92	6.34	-.415	10.07	11.49	-1.418	1895	6	10
1.295	5.91	6.34	-.427	12.09	13.62	-1.523	1896	6	12
1.297	6.01	6.40	-.387	.05	.16	-.111	1897	6	0

MREF RUN CONF PHI REYN TT8F
1.30 195 5 0 3.73 92.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	3.97	4.22	-.259	-1.91	-2.04	.132	1898	4	- 2
1.296	4.00	4.23	-.232	.05	.18	-.130	1899	4	0
1.298	3.97	4.20	-.223	2.03	2.63	-.601	1900	4	2
1.296	3.96	4.21	-.251	4.04	4.78	-.735	1901	4	4
1.295	3.97	4.30	-.340	6.05	7.03	-.979	1902	4	6
1.294	3.95	4.24	-.297	8.08	9.27	-1.184	1903	4	8
1.296	3.93	4.19	-.260	10.11	11.47	-1.357	1904	4	10
1.298	3.91	4.25	-.338	12.14	13.66	-1.516	1905	4	12
1.296	4.00	4.22	-.225	.05	.19	-.132	1906	4	0

MREF RUN CONF PHI REYN TT8F
1.30 196 5 0 3.73 91.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	1.96	2.12	-.160	-1.91	-1.86	-.045	1907	2	- 2
1.297	1.98	2.08	-.102	.02	.32	-.300	1908	2	0
1.296	1.98	2.09	-.108	2.01	2.51	-.493	1909	2	2
1.296	1.92	2.02	-.101	4.05	4.67	-.617	1910	2	4
1.296	1.89	2.08	-.188	6.07	6.93	-.857	1911	2	6
1.297	1.89	2.07	-.184	8.09	9.18	-1.094	1912	2	8
1.296	1.89	2.00	-.115	10.12	11.39	-1.270	1913	2	10
1.296	1.89	2.08	-.191	12.16	13.58	-1.420	1914	2	12
1.294	1.98	2.05	-.069	.02	.31	-.294	1915	2	0

MREF RUN CONF PHI REYN TT8F
1.30 197 5 0 3.73 92.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.295	.96	1.05	-.089	-1.92	-1.81	-.110	1916	1	- 2
1.296	.98	1.02	-.042	.02	.28	-.260	1917	1	0
1.296	.95	1.00	-.055	2.02	2.48	-.461	1918	1	2
1.297	.91	.96	-.051	4.04	4.65	-.607	1919	1	4
1.296	.89	1.02	-.135	6.06	6.94	-.887	1920	1	6
1.296	.88	1.01	-.131	8.09	9.17	-1.081	1921	1	8
1.295	.88	.96	-.084	10.13	11.34	-1.219	1922	1	10
1.294	.87	1.00	-.129	11.93	13.27	-1.336	1923	1	12
1.294	.98	1.00	-.014	.02	.28	-.259	1924	1	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 198 5 0 3.74 90.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.295	-.05	-.02	-.022	-1.97	-1.85	-.117	1925	0	- 2
1.294	-.02	-.03	.007	-.01	.23	-.240	1926	0	0
1.294	-.06	-.06	-.003	2.02	2.45	-.426	1927	0	2
1.294	-.10	-.10	.002	4.06	4.64	-.581	1928	0	4
1.293	-.11	-.05	-.068	6.09	6.95	-.857	1929	0	6
1.295	-.12	-.06	-.065	8.12	9.13	-1.008	1930	0	8
1.294	-.13	-.13	-.001	10.15	11.29	-1.140	1931	0	10
1.294	-.14	-.13	-.010	11.12	12.31	-1.196	1932	0	11
1.296	-.02	-.02	-.004	-.01	.24	-.248	1933	0	0

MREF RUN CONF PHI REYN TT8F
1.30 199 5 0 3.74 92.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	-1.06	-1.10	.035	-1.95	-1.92	-.030	1934	- 1	- 2
1.296	-1.02	-1.10	.072	-.01	.21	-.225	1935	- 1	0
1.296	-1.09	-1.14	.059	2.06	2.50	-.444	1936	- 1	2
1.296	-1.12	-1.21	.086	4.10	4.66	-.566	1937	- 1	4
1.298	-1.13	-1.12	-.014	6.12	6.97	-.850	1938	- 1	6
1.297	-1.14	-1.15	.013	8.10	9.15	-1.049	1939	- 1	8
1.297	-1.14	-1.24	.098	10.03	11.24	-1.208	1940	- 1	10
1.298	-1.03	-1.09	.063	-.01	.23	-.239	1941	- 1	0

MREF RUN CONF PHI REYN TT8F
1.30 200 5 0 3.74 91.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.297	-2.06	-2.15	.096	-1.98	-2.03	.053	1942	- 2	- 2
1.297	-2.03	-2.14	.109	-.01	.20	-.212	1943	- 2	0
1.296	-2.09	-2.21	.127	2.01	2.50	-.485	1944	- 2	2
1.296	-2.12	-2.26	.143	4.08	4.74	-.652	1945	- 2	4
1.297	-2.13	-2.21	.086	6.17	7.07	-.902	1946	- 2	6
1.297	-2.13	-2.22	.088	8.16	9.22	-1.054	1947	- 2	8
1.297	-2.13	-2.24	.112	8.87	9.98	-1.102	1948	- 2	9
1.296	-2.03	-2.15	.121	-.01	.21	-.221	1949	- 2	0

MREF RUN CONF PHI REYN TT8F
1.30 201 5 0 3.74 92.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.297	4.01	4.25	-.243	.05	.18	-.125	1950	4	0
1.297	1.98	2.09	-.105	.02	.28	-.263	1951	2	0
1.299	-.02	-.01	-.015	-.01	.24	-.242	1952	0	0
1.297	-2.03	-2.14	.113	-.01	.20	-.207	1953	- 2	0
1.297	-.02	-.01	-.009	0.00	.24	-.244	1954	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.30 202 5 0 7.99 122.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.292	12.25	13.13	-.889	.05	.18	-.135	1959	12	0
1.293	10.15	10.90	-.744	-.06	.17	-.236	1960	10	0
1.297	8.08	8.65	-.567	.06	.33	-.266	1961	8	0
1.294	6.05	6.45	-.407	.05	.29	-.238	1962	6	0
1.292	4.03	4.26	-.235	.05	.35	-.300	1963	4	0
1.295	3.01	3.18	-.172	.04	.37	-.336	1964	3	0
1.294	1.99	2.12	-.127	.02	.36	-.339	1965	2	0
1.294	.99	1.04	-.046	.02	.31	-.286	1966	1	0
1.291	-.02	-.02	.002	-.01	.30	-.303	1967	0	0
1.295	-1.02	-1.08	.052	-.01	.29	-.298	1968	- 1	0
1.295	-2.03	-2.15	.118	-.01	.30	-.307	1969	- 2	0
1.295	-3.05	-3.22	.170	-.01	.30	-.306	1970	- 3	0
1.295	-.02	-.02	.002	-.01	.30	-.313	1971	0	0

MREF RUN CONF PHI REYN TT8F
1.30 238 5 0 2.33 90.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.296	-.02	-.05	.028	-.01	.25	-.253	2275	0	0
1.294	-.03	-.05	.019	-.01	.25	-.259	2276	0	0
1.294	8.03	8.45	-.422	.06	.17	-.115	2277	8	0
1.295	6.01	6.31	-.300	.05	.16	-.107	2278	6	0
1.295	4.00	4.15	-.149	.05	.39	-.339	2279	4	0
1.295	1.99	2.04	-.058	.02	.29	-.275	2280	2	0
1.294	.98	1.00	-.011	.02	.26	-.248	2281	1	0
1.296	-.02	-.05	.030	-.01	.25	-.262	2282	0	0
1.296	-1.02	-1.10	.081	-.01	.24	-.250	2283	- 1	0
1.299	-2.03	-2.14	.110	-.01	.23	-.234	2284	- 2	0
1.299	-3.04	-3.20	.165	-.01	.25	-.253	2285	- 3	0
1.296	-.02	-.03	.006	-.01	.23	-.240	2286	0	0

MREF RUN CONF PHI REYN TT8F
1.40 20 1 0 4.15 99.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.408	-.02	-.03	.016	-.01	.23	-.239	189	0	0
1.403	4.01	4.21	-.199	.05	.36	-.313	190	4	0
1.403	1.99	2.05	-.058	.02	.27	-.248	191	2	0
1.401	.98	.99	-.004	.02	.24	-.220	192	1	0
1.399	-.02	-.02	.006	-.01	.21	-.220	193	0	0
1.402	-1.02	-1.11	.092	-.01	.18	-.187	194	- 1	0
1.403	-2.02	-2.18	.153	-.01	.18	-.187	195	- 2	0
1.403	-3.03	-3.23	.197	-.01	.16	-.169	196	- 3	0
1.402	-.02	-.06	.038	-.01	.21	-.217	197	0	0

FIGURE 1: SUMMARY OF NASA/ARC 11- X 11-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.40 21 1 0 4.13 102.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.401	-.02	-.06	.048	-.01	.22	-.231	198	0	0
1.400	4.01	4.19	-.184	.05	.33	-.282	199	4	0
1.401	1.99	2.05	-.060	.02	.19	-.167	200	2	0
1.401	.99	.97	.015	.02	.22	-.200	201	1	0
1.401	-.02	-.06	.043	-.01	.21	-.221	202	0	0
1.400	-1.02	-1.11	.089	-.01	.18	-.190	203	- 1	0
1.400	-2.02	-2.15	.131	-.01	.20	-.204	204	- 2	0
1.480	-3.04	-3.20	.163	-.01	.19	-.194	205	- 3	0
1.401	-.02	-.05	.026	-.01	.21	-.212	206	0	0

MREF RUN CONF PHI REYN TT8F
1.40 42 2 1 4.22 92.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.404	.02	.02	-.003	.24	.54	-.305	412	0	0
1.399	-3.00	-3.20	.207	.19	.42	-.232	413	- 3	0
1.401	-1.99	-2.12	.131	.21	.46	-.251	414	- 2	0
1.400	-.98	-1.06	.076	.21	.49	-.281	415	- 1	0
1.402	.02	0.00	.016	.24	.52	-.279	416	0	0
1.401	1.03	1.05	-.023	.24	.56	-.325	417	1	0
1.400	2.03	2.10	-.077	.24	.60	-.360	418	2	0
1.403	3.04	3.19	-.153	.24	.65	-.416	419	3	0
1.403	.02	.02	-.003	.24	.54	-.305	420	0	0

MREF RUN CONF PHI REYN TT8F
1.40 237 5 0 4.18 96.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.402	-.02	-.05	.029	-.07	.22	-.291	2262	0	0
1.403	10.10	10.83	-.725	-.13	.30	-.430	2263	10	0
1.403	8.04	8.54	-.499	0.00	.36	-.363	2264	8	0
1.406	6.02	6.38	-.357	-.01	.43	-.437	2265	6	0
1.403	4.01	4.20	-.189	-.01	.42	-.431	2267	4	0
1.405	1.99	2.09	-.099	-.04	.32	-.363	2268	2	0
1.403	.98	1.01	-.022	-.04	.27	-.317	2269	1	0
1.400	-.02	-.04	.020	-.07	.23	-.294	2270	0	0
1.403	-1.02	-1.09	.070	-.07	.20	-.269	2271	- 1	0
1.403	-2.03	-2.15	.120	-.07	.19	-.265	2272	- 2	0
1.403	-3.04	-3.21	.162	-.07	.20	-.274	2273	- 3	0
1.403	-.02	-.05	.026	-.07	.23	-.301	2274	0	0

FIGURE 1: SUMMARY OF NASA/APC 11- X 11-FOOT WIND TUNNEL DATA (CONCLUDED)

MREF RUN CONF PHI REYN TTBF
1.51 301 7 10 3.96 127.3

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.552	.05	.06	-.012	-.13	.04	-.171	11	0	0
1.552	.09	.28	-.196	11.93	13.48	-1.553	12	0	12
1.552	.04	.15	-.106	9.91	11.38	-1.470	13	0	10
1.552	.03	.17	-.139	7.90	9.25	-1.353	14	0	8
1.552	.03	.15	-.117	5.90	7.06	-1.154	15	0	6
1.552	.03	.14	-.109	3.91	4.71	-.804	16	0	4
1.552	.03	.12	-.093	1.85	2.33	-.483	17	0	2
1.552	.05	.07	-.028	-.13	.02	-.149	18	0	0
1.552	.06	.03	.033	-2.10	-2.24	.134	19	0	-2
1.552	.29	-.01	.300	-4.19	-4.61	.413	20	0	-4
1.552	.05	.07	-.020	-.13	.05	-.178	21	0	0

MREF RUN CONF PHI REYN TTBF
1.51 306 8 11 3.98 125.4

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.552	-.22	-.23	.011	.13	.07	.062	76	0	0
1.552	-.44	-.10	-.336	4.19	4.78	-.592	77	0	4
1.552	-.22	-.16	-.061	2.10	2.39	-.267	78	0	2
1.552	-.22	-.22	.002	.13	.07	.065	79	0	0
1.552	-.20	-.28	.083	-1.85	-2.17	.321	80	0	-2
1.552	-.20	-.31	.110	-3.91	-4.59	.686	81	0	-4
1.552	-.21	-.34	.136	-5.90	-6.84	.944	82	0	-6
1.552	-.21	-.37	.162	-7.90	-9.09	1.193	83	0	-8
1.552	-.22	-.36	.137	-9.91	-11.26	1.351	84	0	-10
1.552	-.26	-.49	.229	-11.93	-13.29	1.353	85	0	-12
1.552	-.22	-.23	.006	.13	.06	.069	86	0	0

MREF RUN CONF PHI REYN TTBF
1.51 317 9 1 3.98 125.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.552	.14	-.14	.283	.20	.15	.052	197	0	0
1.552	-2.87	-3.30	.426	.18	.19	-.007	198	-3	0
1.552	-1.84	-2.28	.443	.18	.20	-.019	199	-2	0
1.552	-.95	-1.16	.309	.19	.15	.041	200	-1	0
1.552	.14	-.13	.261	.20	.13	.076	201	0	0
1.552	1.12	.93	.189	.19	.14	.044	202	1	0
1.552	2.11	1.96	.144	.21	.16	.052	203	2	0
1.552	3.16	3.07	.084	.32	.13	.190	204	3	0
1.552	.14	-.13	.269	.20	.14	.066	206	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA

MREF RUN CONF PHI REYN TT8F
1.51 320 9 1 3.93 131.2

MR	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.552	.08	-.06	.135	2.09	2.41	-.317	226	0	2
1.552	.01	-.11	.126	.20	.09	.112	227	0	0
1.552	-.03	-.15	.122	-1.77	-1.99	.218	228	0	-2
1.552	-.11	-.24	.126	-3.77	-4.33	.563	229	0	-4
1.552	-.17	-.36	.185	-5.72	-6.62	.901	230	0	-6
1.552	-.31	-.40	.091	-9.65	-11.14	1.484	232	0	-10
1.552	-.34	-.49	.144	-10.53	-12.18	1.649	233	0	-11
1.552	.01	-.12	.133	.20	.12	.086	234	0	0

MREF RUN CONF PHI REYN TT8F
1.51 330 10 0 4.04 117.9

MR	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.552	-.13	-.29	.160	-.14	-.01	-.130	312	0	0
1.552	16.02	16.86	-.847	-.01	-.07	.063	313	16	0
1.552	14.01	14.77	-.763	-.03	-.08	.057	313	14	0
1.552	11.93	12.55	-.653	-.07	-.03	-.038	314	12	0
1.552	9.91	10.37	-.461	-.03	0.00	-.031	314	10	0
1.552	7.90	8.26	-.359	-.02	.06	-.082	315	8	0
1.552	5.90	6.14	-.232	-.02	.08	-.099	315	6	0
1.552	3.91	4.02	-.117	-.02	.05	-.064	316	4	0
1.552	1.85	1.86	-.008	-.01	.09	-.100	316	2	0
1.552	-.13	-.25	.128	-.03	.11	-.141	317	0	0
1.552	-1.11	-1.34	.228	-.02	.17	-.194	318	-1	0
1.552	-2.11	-2.40	.290	-.05	.17	-.220	318	-2	0
1.552	-3.15	-3.39	.241	-.17	.20	-.363	319	-3	0
1.552	-.13	-.25	.127	-.03	.11	-.145	319	0	0
1.552	.86	.74	.119	-.03	.12	-.146	320	1	0

MREF RUN CONF PHI REYN TT8F
1.51 331 10 0 3.98 125.2

MR	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.552	-.19	-.32	.128	-1.94	-2.18	.244	321	0	-2
1.552	-.13	-.26	.136	-.03	.09	-.126	321	0	0
1.552	-.08	-.22	.134	1.95	2.34	-.388	323	0	?
1.552	0.00	-.15	.145	3.93	4.39	-.456	323	0	4
1.552	.06	-.03	.093	5.88	6.72	-.841	324	0	6
1.552	.11	-.07	.184	7.84	9.05	-1.209	325	0	8
1.552	.19	-.01	.202	9.82	11.39	-1.570	325	0	10
1.552	.22	.05	.170	10.51	12.06	-1.553	326	0	11
1.552	-.13	-.27	.139	-.04	.10	-.138	326	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.51 343 10 0 4.08 114.3

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	-.13	-.28	.153	-.03	.08	-.116	507	0	0
1.553	3.91	4.01	-.097	-.02	.03	-.049	508	4	0
1.553	1.85	1.81	.033	-.01	.08	-.095	509	2	0
1.553	.86	.74	.119	-.03	.08	-.104	510	1	0
1.553	-.13	-.26	.136	-.03	.07	-.108	511	0	0
1.553	-1.11	-1.30	.195	-.02	.12	-.143	512	-1	0
1.553	-2.10	-2.37	.269	-.05	.12	-.167	513	-2	0
1.553	-.13	-.26	.131	-.03	.11	-.145	514	0	0

MREF RUN CONF PHI REYN TT8F
1.51 344 10 0 4.02 120.1

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	15.96	16.79	-.836	-2.00	-1.98	-.019	515	16	-2
1.553	16.02	16.87	-.856	-.01	-.10	.089	516	16	0
1.553	16.04	16.96	-.920	1.99	1.74	.250	517	16	2
1.553	16.11	17.07	-.963	3.96	3.46	.522	518	16	4
1.553	16.22	17.07	-.850	5.90	5.44	.455	519	16	6
1.553	16.33	17.07	-.746	7.83	7.57	.268	520	16	8
1.553	16.30	17.01	-.706	9.83	10.06	-.229	521	16	10
1.553	16.27	17.07	-.799	11.83	12.47	-.634	522	16	12
1.553	16.02	16.96	-.939	-.01	-.10	.083	523	16	0

MREF RUN CONF PHI REYN TT8F
1.51 345 10 0 4.00 122.7

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	13.95	14.76	-.810	-2.00	-1.90	-.091	524	14	-2
1.553	14.00	14.79	-.792	-.03	-.09	.055	525	14	0
1.553	14.02	14.87	-.848	1.92	1.76	.161	526	14	2
1.553	14.08	14.92	-.844	3.89	3.43	.461	527	14	4
1.553	14.18	14.96	-.778	5.88	5.35	.526	528	14	6
1.553	14.27	14.87	-.602	7.87	7.46	.416	529	14	8
1.553	14.20	14.93	-.729	9.84	9.73	.107	530	14	10
1.553	14.14	15.02	-.878	11.81	12.24	-.428	531	14	12
1.553	14.00	14.72	-.714	-.03	-.06	.031	532	14	0

MREF RUN CONF PHI REYN TT8F
1.51 346 10 0 3.98 125.0

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	11.95	12.57	-.626	-1.99	-1.81	-.176	533	12	-2
1.553	11.93	12.61	-.680	-.07	-.02	-.049	534	12	0
1.553	11.95	12.64	-.690	1.90	1.78	.126	535	12	2
1.553	12.00	12.72	-.713	3.90	3.38	.524	536	12	4
1.553	12.10	12.84	-.741	5.88	5.42	.463	537	12	6
1.553	12.18	12.77	-.594	7.87	7.31	.553	538	12	8
1.553	12.11	12.82	-.707	9.84	9.50	.343	539	12	10
1.553	12.04	12.92	-.879	11.82	11.92	-.100	540	12	12
1.553	11.93	12.66	-.723	-.07	0.00	-.071	541	12	0

FIGURE 24 SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.51 347 10 0 3.97 126.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	9.97	10.55	-.581	-1.89	-1.76	-.130	542	10	- 2
1.553	10.03	10.48	-.446	-.04	.04	-.082	543	10	0
1.553	10.04	10.52	-.479	1.93	1.76	.166	544	10	2
1.553	10.09	10.61	-.516	3.90	3.28	.621	545	10	4
1.553	10.18	10.67	-.489	5.87	5.40	.476	546	10	6
1.553	10.26	10.66	-.403	7.85	7.41	.448	547	10	8
1.553	10.20	10.68	-.478	9.84	9.34	.504	548	10	10
1.553	10.14	10.76	-.622	11.85	11.67	.178	549	10	12
1.553	10.03	10.48	-.448	-.03	.03	-.061	550	10	0

MREF RUN CONF PHI REYN TT8F
1.51 348 10 0 3.97 126.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	7.83	8.23	-.401	-1.96	-1.74	-.219	551	8	- 2
1.553	7.90	8.30	-.398	-.02	.01	-.032	552	8	0
1.553	7.96	8.21	-.255	1.96	1.78	.178	554	8	2
1.553	8.05	8.34	-.296	3.95	3.35	.601	555	8	4
1.553	8.09	8.39	-.309	5.91	5.40	.504	556	8	6
1.553	8.11	8.34	-.228	7.88	7.48	.394	557	8	8
1.553	8.20	8.32	-.124	9.84	9.46	.386	558	8	10
1.553	8.28	8.50	-.222	11.81	11.71	.094	559	8	12
1.553	7.90	8.20	-.381	-.02	0.00	-.022	560	8	0

MREF RUN CONF PHI REYN TT8F
1.51 349 10 0 3.96 128.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	5.86	6.11	-.255	-1.98	-1.65	-.329	561	6	- 2
1.553	5.90	6.17	-.263	-.02	.06	-.081	562	6	0
1.553	5.95	6.10	-.149	1.97	1.89	.079	563	6	2
1.553	6.04	6.22	-.179	3.97	3.41	.557	564	6	4
1.553	6.14	6.24	-.100	5.87	5.58	.287	565	6	6
1.553	6.23	6.22	.012	7.78	7.63	.145	566	6	8
1.553	6.20	6.25	-.047	9.80	9.94	-.141	567	6	10
1.553	6.17	6.46	-.283	11.83	11.94	-.106	568	6	12
1.553	5.90	6.13	-.226	-.02	.08	-.103	569	6	0

MREF RUN CONF PHI REYN TT8F
1.51 350 10 0 3.95 128.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	3.87	3.99	-.114	-2.01	-1.77	-.241	570	4	- 2
1.553	3.91	4.01	-.105	-.02	.06	-.079	571	4	0
1.553	3.94	4.07	-.130	1.92	2.00	-.076	572	4	2
1.553	4.01	4.07	-.054	3.87	3.62	.246	573	4	4
1.553	4.08	4.17	-.088	5.83	5.81	.025	574	4	6
1.553	4.14	4.18	-.041	7.81	8.03	-.222	575	4	8
1.553	4.10	4.15	-.056	9.81	10.31	-.495	576	4	10
1.553	4.06	4.39	-.330	11.81	12.56	-.750	577	4	12
1.553	3.91	4.02	-.111	-.02	.07	-.086	578	4	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.51 351 10 0 3.95 128.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	1.87	1.79	.074	-1.99	-1.95	-.043	579	2	- 2
1.553	1.85	1.85	-.006	-.02	.09	-.108	590	2	0
1.553	1.87	1.90	-.032	1.92	2.08	-.158	581	2	2
1.553	1.94	1.97	-.030	3.88	3.94	-.063	582	2	4
1.553	2.02	2.03	-.013	5.85	6.23	-.380	583	2	6
1.553	2.09	2.02	.064	7.82	8.52	-.698	584	2	8
1.553	2.03	2.12	-.088	9.82	10.93	-1.114	585	2	10
1.553	1.98	2.31	-.333	11.82	13.01	-1.193	586	2	12
1.553	1.85	1.83	.012	-.01	.08	-.091	587	2	0

MREF RUN CONF PHI REYN TT8F
1.51 352 10 0 3.95 128.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	.81	.74	.071	-1.93	-2.05	.124	588	1	- 2
1.553	.86	.76	.105	-.03	.08	-.108	589	1	0
1.553	.88	.82	.055	1.93	2.23	-.309	590	1	2
1.553	.94	.92	.018	3.89	4.13	-.243	591	1	4
1.553	1.02	.99	.027	5.87	6.50	-.628	592	1	6
1.553	1.09	.99	.098	7.86	8.24	-.980	593	1	8
1.553	1.05	1.05	-.003	9.85	11.12	-1.278	594	1	10
1.553	1.01	1.21	-.203	11.47	12.86	-1.388	595	1	11
1.553	.86	.78	.080	-.02	.09	-.114	596	1	0

MREF RUN CONF PHI REYN TT8F
1.51 353 10 0 3.94 129.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	-.19	-.30	.103	-1.93	-2.19	.260	597	0	- 2
1.553	-.13	-.23	.101	-.03	.09	-.122	598	0	0
1.553	-.08	-.18	.094	1.95	2.39	-.438	599	0	2
1.553	0.00	-.12	.117	3.93	4.39	-.455	600	0	4
1.553	.06	-.03	.093	5.89	6.77	-.880	601	0	6
1.553	.11	-.04	.148	7.84	9.07	-1.226	602	0	8
1.553	.19	0.00	.185	9.82	11.31	-1.497	603	0	10
1.553	.22	.08	.134	10.54	12.13	-1.591	604	0	11
1.553	-.13	-.24	.113	-.03	.12	-.154	605	0	0

MREF RUN CONF PHI REYN TT8F
1.51 354 10 0 3.94 130.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.553	-1.17	-1.35	.172	-1.99	-2.21	.225	607	- 1	- 2
1.553	-1.11	-1.29	.181	-.02	.16	-.186	608	- 1	0
1.553	-1.08	-1.25	.167	1.95	2.50	-.553	610	- 1	2
1.553	-1.01	-1.16	.156	3.93	4.54	-.607	611	- 1	4
1.553	-.94	-1.09	.149	5.85	6.95	-1.106	612	- 1	6
1.553	-.87	-1.11	.236	7.76	9.24	-1.479	613	- 1	8
1.553	-.88	-1.04	.160	9.47	11.16	-1.692	614	- 1	10
1.553	-1.11	-1.28	.175	-.03	.18	-.207	615	- 1	0

FIGURE 21 SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
1.51 355 10 0 3.93 130.6

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.553	-2.13	-2.41	.282	-2.04	-2.22	.185	616	- 2	- 2
1.553	-2.10	-2.40	.291	-.05	.19	-.242	617	- 2	0
1.553	-2.08	-2.33	.251	1.92	2.52	-.598	618	- 2	2
1.553	-2.02	-2.19	.176	3.90	4.66	-.766	619	- 2	4
1.553	-1.98	-2.12	.135	5.84	7.03	-1.192	620	- 2	6
1.553	-1.95	-2.18	.229	7.78	9.34	-1.560	621	- 2	3
1.553	-1.95	-2.19	.235	8.20	9.83	-1.626	622	- 2	8
1.553	-2.10	-2.37	.261	-.05	.16	-.214	623	- 2	0

MREF RUN CONF PHI REYN TTBF
1.51 350 10 0 3.93 130.2

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.553	-.13	-.24	.117	-.03	.12	-.154	624	0	0
1.553	3.91	4.01	-.099	-.02	.05	-.068	625	4	0
1.553	1.55	1.89	-.040	-.01	.06	-.076	626	2	0
1.553	.86	.77	.087	-.03	.12	-.150	627	1	0
1.553	-.13	-.23	.096	-.03	.07	-.108	628	0	0
1.553	-1.11	-1.29	.185	-.02	.17	-.190	629	- 1	0
1.553	-2.10	-2.36	.260	-.05	.15	-.200	630	- 2	0
1.553	-.13	-.23	.108	-.03	.12	-.158	631	0	0

MREF RUN CONF PHI REYN TTBF
1.51 355 10 0 3.89 133.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.552	-.13	-.19	.063	-.04	.14	-.176	884	0	0
1.674	-.19	-.22	.036	.05	-.08	.138	886	0	0
1.630	-.16	-.12	-.047	.02	-.19	.208	887	0	0
1.726	-.21	-.30	.091	.09	-.06	.153	888	0	0
1.766	-.20	-.29	.098	.04	-.03	.073	889	0	0
1.807	-.18	-.22	.040	-.02	-.05	.033	890	0	0
1.847	-.17	-.18	.014	-.07	-.10	.027	891	0	0
1.856	-.17	-.23	.062	-.08	-.13	.049	892	0	0
1.864	-.16	-.23	.064	-.09	-.11	.019	893	0	0
1.872	-.16	-.19	.031	-.10	-.05	-.050	894	0	0
1.880	-.16	-.19	.021	-.11	-.01	-.106	895	0	0
1.888	-.15	-.20	.045	-.13	.02	-.148	896	0	0
1.935	-.14	-.18	.038	-.23	-.03	-.199	897	0	0
1.983	-.13	-.22	.087	-.34	-.10	-.246	898	0	0
2.077	-.12	-.20	.088	-.56	-.37	-.189	899	0	- 1
2.276	-.15	-.23	.077	-.64	-.44	-.193	902	0	- 1
2.391	-.21	-.26	.051	.10	-.08	.174	903	0	0
2.555	-.10	-.16	.083	.39	.56	-.161	904	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

AD-A133 955

AERODYNAMIC CHARACTERISTICS OF THE AFFTC NOSEBOOM
INSTRUMENTATION UNIT VOLUME 2(U) AIR FORCE FLIGHT TEST
CENTER EDWARDS AFB CA K RAWLINGS ET AL. MAR 82

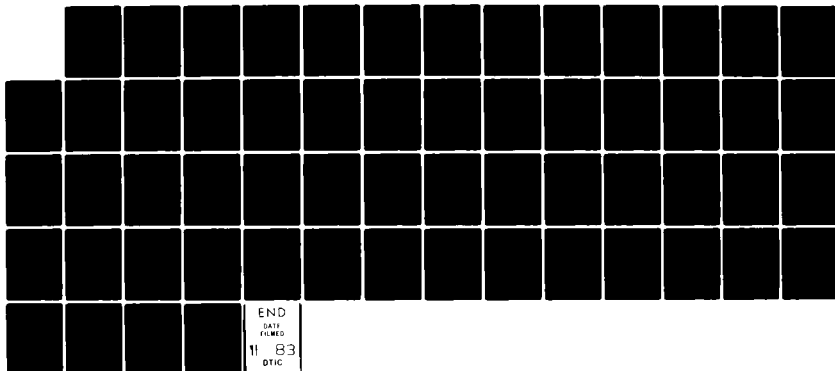
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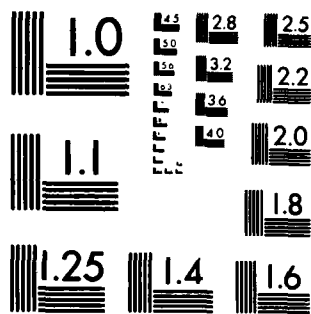
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

MREF RUN CONF PHI REYN TT8F
1.51 401 10 0 1.98 94.5

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.552	11.89	12.55	-.662	-.08	-.19	.116	1044	12	0
1.552	9.88	10.36	-.476	-.03	-.18	.145	1045	10	0
1.552	7.88	8.29	-.408	-.03	-.16	.138	1046	6	0
1.552	5.83	6.13	-.243	-.02	-.12	.096	1047	6	0
1.552	3.90	4.00	-.104	-.02	.13	-.149	1048	4	0
1.552	1.84	1.85	-.010	-.02	.14	-.159	1049	2	0
1.552	.86	.78	.079	-.03	.12	-.144	1050	1	0
1.552	-1.11	-1.32	.210	-.03	.14	-.170	1052	-1	0
1.552	-2.10	-2.40	.299	-.05	.12	-.175	1053	-2	0
1.552	-.12	-.26	.139	-.04	.14	-.173	1054	0	0

MREF RUN CONF PHI REYN TT8F
1.71 329 9 1 3.67 121.6

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.726	.22	-.04	.262	.07	.19	-.116	297	0	0
1.726	-2.79	-3.17	.381	.05	.26	-.204	298	-3	0
1.726	-1.76	-2.11	.356	.05	.24	-.193	299	-2	0
1.726	-.77	-1.02	.252	.06	.21	-.143	300	-1	0
1.726	.22	-.02	.239	.07	.19	-.112	301	0	0
1.726	1.20	1.03	.175	.06	.17	-.106	302	1	0
1.726	2.19	2.06	.125	.08	.15	-.072	303	2	0
1.726	3.23	3.15	.081	.19	.14	.042	304	3	0
1.726	4.28	4.19	.087	.30	.12	.178	305	4	0
1.726	.22	-.03	.249	.07	.17	-.098	306	0	0
1.726	.22	-.05	.273	.07	.20	-.126	307	0	0
1.726	.22	-.04	.265	.07	.21	-.130	308	0	0

MREF RUN CONF PHI REYN TT8F
1.71 341 10 0 3.67 122.4

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.725	9.82	10.25	-.427	.10	-.15	.251	387	10	0
1.725	7.82	8.16	-.344	.11	-.15	.261	387	8	0
1.725	5.82	6.00	-.181	.11	-.12	.234	388	6	0
1.725	3.82	3.89	-.066	.12	-.12	.239	388	4	0
1.725	1.76	1.75	.007	.12	-.13	.251	389	2	0
1.725	.78	.67	.104	.11	-.07	.183	389	1	0
1.725	-.21	-.34	.132	.10	-.05	.153	390	0	0
1.725	-.21	-.31	.100	.10	-.09	.188	390	0	0
1.725	-.21	-.32	.109	.10	-.09	.188	391	0	0
1.725	-.21	-.32	.109	.10	-.08	.183	391	0	0
1.725	-.21	-.32	.110	.10	-.08	.179	392	0	0
1.725	-.21	-.33	.118	.10	-.07	.171	392	0	0
1.725	-1.19	-1.40	.211	.11	-.05	.164	393	-1	0
1.725	-2.19	-2.44	.251	.08	-.04	.120	393	-2	0
1.725	-3.24	-3.37	.132	-.03	.01	-.042	394	-3	0
1.725	-.21	-.32	.109	.10	-.08	.179	394	0	0

FIGURE 2: SUMMARY OF NASA/ARC α -X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.71 342 10 0 3.69 120.4

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NRT
1.725	-.22	-.33	.114	-.01	-.18	.167	395	0	0
1.766	-.20	-.34	.137	-.07	-.17	.106	395	0	0
1.607	-.19	-.27	.064	-.12	-.15	.027	396	0	0
1.847	-.17	-.22	.049	-.18	-.22	.046	396	0	0
1.808	-.16	-.22	.059	-.23	-.05	-.180	397	0	0
1.935	-.15	-.24	.091	-.34	-.17	-.173	397	0	0
1.982	-.14	-.27	.133	-.45	-.20	-.242	398	0	0
1.982	-.14	-.28	.137	-.45	-.20	-.243	398	0	0
2.077	-.12	-.24	.116	-.66	-.53	-.133	399	0	-1
2.077	-.12	-.25	.130	-.66	-.52	-.142	399	0	-1
2.277	-.16	-.26	.101	-.73	-.57	-.163	400	0	-1
2.309	-.21	-.29	.080	-.01	-.22	.205	400	0	0
2.555	-.10	-.23	.122	.30	.42	-.124	401	0	0
1.866	-.16	-.21	.055	-.23	-.10	-.135	401	0	0
1.879	-.16	-.19	.025	-.22	-.14	-.076	402	0	0
1.872	-.16	-.19	.027	-.21	-.21	-.001	402	0	0
1.863	-.17	-.24	.078	-.20	-.25	.049	403	0	0
1.855	-.17	-.26	.093	-.19	-.27	.078	403	0	0
1.847	-.17	-.22	.050	-.18	-.27	.095	404	0	0
1.553	-.13	-.27	.137	-.14	.02	-.153	404	0	0

MREF RUN CONF PHI REYN TT8F
1.91 302 7 10 4.35 126.2

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NRT
1.866	.13	-.30	.428	-.16	-.01	-.141	22	0	0
1.866	.17	-.15	.316	11.91	11.74	.168	23	0	12
1.866	.13	-.15	.279	9.89	9.44	.452	24	0	10
1.866	.12	-.29	.401	7.88	7.42	.460	25	0	8
1.866	.12	-.28	.392	5.88	5.51	.375	26	0	6
1.866	.11	-.29	.396	3.88	3.58	.303	27	0	4
1.866	.11	-.29	.392	1.81	1.75	.064	28	0	2
1.866	.13	-.28	.410	-.15	-.01	-.146	29	0	0
1.866	.14	-.31	.453	-2.13	-1.83	-.306	30	0	-2
1.866	.39	-.33	.711	-4.22	-3.59	-.634	31	0	-4
1.866	.13	-.29	.423	-.15	-.03	-.123	32	0	0

MREF RUN CONF PHI REYN TT8F
1.91 307 8 11 4.31 130.6

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NRT
1.867	-.32	.13	-.445	.16	.12	.040	87	0	0
1.867	-.35	.14	-.693	4.22	3.75	.460	88	-1	4
1.867	-.32	.13	-.450	2.13	1.93	.203	89	0	2
1.867	-.32	.14	-.461	.16	.13	.033	90	0	0
1.867	-.29	.11	-.401	-1.82	-1.64	-.180	91	0	-2
1.867	-.30	.11	-.410	-3.89	-3.41	-.471	92	0	-4
1.867	-.30	.10	-.403	-5.87	-5.20	-.679	93	0	-6
1.867	-.31	.06	-.361	-7.88	-7.15	-.728	94	0	-3
1.867	-.32	-.04	-.275	-9.89	-9.13	-.759	95	0	-10
1.867	-.36	-.09	-.268	-11.91	-11.40	-.509	96	0	-12
1.867	-.32	.14	-.456	.16	.13	.036	97	0	0

FIGURE 2: SUMMARY OF NACA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.91 313 9 1 4.30 131.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.888	.17	-.10	.265	.30	.09	.207	207	0	0
1.888	-2.35	-3.18	.340	.28	.08	.198	209	- 3	0
1.888	-1.81	-2.17	.357	.28	.08	.193	210	- 2	0
1.888	-.33	-1.07	.243	.29	.06	.225	211	- 1	0
1.888	.16	-.07	.232	.30	.04	.258	212	0	0
1.888	1.15	.97	.177	.29	.05	.237	213	1	0
1.888	2.14	1.99	.155	.31	.03	.276	214	2	0
1.888	3.19	3.05	.138	.43	.01	.416	215	3	0
1.888	.16	-.10	.259	.30	.04	.255	216	0	0

MREF RUN CONF PHI REYN TT8F
1.91 319 9 1 4.28 133.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.888	.25	.02	.224	2.32	1.93	.387	217	0	2
1.888	.17	-.09	.264	.30	.04	.255	218	0	0
1.888	.12	-.12	.233	-1.80	-1.74	-.064	219	0	- 2
1.888	.06	-.17	.228	-3.90	-3.66	-.243	220	0	- 4
1.888	.03	-.24	.265	-5.99	-5.63	-.365	221	0	- 6
1.888	-.01	-.23	.216	-8.09	-7.64	-.449	222	0	- 8
1.888	-.10	-.33	.230	-10.21	-9.78	-.429	223	0	-10
1.888	-.14	-.35	.208	-11.13	-10.70	-.434	224	0	-11
1.888	.17	-.11	.283	.30	.02	.280	225	0	0

MREF RUN CONF PHI REYN TT8F
1.91 332 10 0 4.31 129.8

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.888	-.15	-.26	.122	-.13	-.05	-.076	327	0	0
1.888	16.00	16.69	-.687	-.10	-.22	.125	327	16	0
1.888	13.99	14.57	-.585	-.12	-.20	.082	328	14	0
1.888	11.91	12.40	-.493	-.17	-.14	-.027	328	12	0
1.888	9.89	10.26	-.361	-.12	-.21	.091	329	10	0
1.888	7.88	8.18	-.302	-.11	-.14	.031	329	8	0
1.888	5.88	6.03	-.150	-.11	-.09	-.024	330	6	0
1.888	3.88	3.94	-.065	-.11	-.08	-.027	330	4	0
1.888	1.82	1.81	.015	-.10	-.06	-.047	331	2	0
1.888	.84	.74	.096	-.12	-.04	-.071	331	1	0
1.888	-.15	-.24	.090	-.13	-.06	-.065	332	0	0
1.888	-1.14	-1.30	.168	-.11	-.04	-.076	332	- 1	0
1.888	-2.13	-2.34	.213	-.14	-.04	-.102	333	- 2	0
1.888	-3.18	-3.33	.155	-.26	-.04	-.220	333	- 3	0
1.888	-.15	-.24	.086	-.13	-.04	-.084	334	0	0

FIGURE 21 SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI KEYN TTBF
1.91 333 10 0 4.31 130.0

M6	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.888	-.15	-.24	.090	-.13	-.02	-.106	334	0	0
1.888	-.15	-.26	.104	-.13	-.01	-.110	335	0	0
1.888	-.23	-.37	.138	-2.14	-1.85	-.294	335	0	- 2
1.888	-.15	-.27	.113	-.12	0.00	-.115	336	0	0
1.888	-.10	-.25	.148	1.98	1.81	.173	336	0	2
1.888	-.05	-.24	.187	4.07	3.69	.382	337	0	4
1.888	-.01	-.17	.163	6.16	5.69	.468	337	0	6
1.888	.02	-.16	.181	8.26	7.86	.400	338	0	8
1.888	.11	-.05	.159	10.39	9.93	.457	338	0	10
1.888	.14	-.02	.159	11.13	10.73	.400	339	0	11
1.888	-.15	-.27	.113	-.13	-.02	-.106	339	0	0

MREF RUN CONF PHI REYN TTBF
1.91 357 10 0 4.29 132.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	-.15	-.22	.063	-.12	.03	-.151	632	0	0
1.887	3.89	3.98	-.091	-.10	.02	-.120	633	4	0
1.887	1.82	1.87	-.048	-.10	0.00	-.102	634	2	0
1.887	.84	.80	.035	-.11	.01	-.127	635	1	0
1.887	-.15	-.16	.028	-.12	.01	-.136	636	0	0
1.887	-1.14	-1.25	.109	-.11	.02	-.132	637	- 1	0
1.887	-2.13	-2.27	.139	-.14	.01	-.151	638	- 2	0
1.887	-.15	-.19	.035	-.12	.02	-.139	639	0	0

MREF RUN CONF PHI REYN TTBF
1.91 358 10 0 4.28 133.2

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	15.93	16.71	-.789	-2.21	-2.65	.440	640	16	- 2
1.887	16.00	16.73	-.736	-.09	-.34	.254	641	16	0
1.887	16.03	16.80	-.762	2.02	1.92	.097	642	16	2
1.887	16.07	16.83	-.757	4.12	4.43	-.301	643	16	4
1.887	16.16	16.95	-.787	6.18	6.87	-.697	644	16	6
1.887	16.24	16.87	-.628	8.24	9.11	-.864	645	16	8
1.887	16.23	16.81	-.586	10.40	10.96	-.564	646	16	10
1.887	16.21	16.85	-.639	12.56	12.86	-.297	647	16	13
1.887	16.00	16.79	-.788	-.09	-.32	.231	648	16	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.91 354 10 0 4.29 132.9

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.887	13.92	14.60	-.680	-2.21	-2.64	.431	649	14	- 2
1.887	13.99	14.63	-.644	-.11	-.27	.156	650	14	0
1.887	14.02	14.69	-.668	1.96	2.03	-.075	651	14	2
1.887	14.05	14.76	-.708	4.02	4.51	-.483	652	14	4
1.887	14.12	14.82	-.695	6.15	6.98	-.824	653	14	6
1.887	14.19	14.74	-.546	8.30	9.38	-1.081	654	14	8
1.887	14.14	14.80	-.659	10.42	11.07	-.647	655	14	10
1.887	14.08	14.86	-.780	12.55	13.04	-.494	656	14	13
1.887	13.99	14.67	-.678	-.11	-.09	-.025	657	14	0

MREF RUN CONF PHI REYN TT8F
1.91 360 10 0 4.28 132.9

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.887	11.91	12.39	-.477	-2.20	-2.32	.117	658	12	- 2
1.887	11.91	12.40	-.485	-2.20	-2.34	.139	659	12	- 2
1.887	11.91	12.46	-.549	-.16	-.07	-.094	660	12	0
1.887	11.94	12.47	-.532	1.94	2.23	-.284	661	12	2
1.887	11.96	12.55	-.587	4.04	4.62	-.579	662	12	4
1.887	12.03	12.62	-.588	6.16	6.82	-.663	663	12	6
1.887	12.09	12.57	-.480	8.24	9.28	-.992	664	12	8
1.887	12.03	12.70	-.668	10.41	11.18	-.770	665	12	10
1.887	11.97	12.70	-.721	12.54	13.08	-.545	666	12	13
1.887	11.91	12.50	-.587	-.16	-.23	.067	667	12	0

MREF RUN CONF PHI REYN TT8F
1.91 361 10 0 4.29 132.8

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.887	9.93	10.38	-.447	-2.19	-2.37	.183	668	10	- 2
1.887	10.01	10.41	-.398	-.12	-.16	.042	669	10	0
1.887	10.03	10.43	-.398	1.97	2.03	-.070	670	10	2
1.887	10.05	10.51	-.459	4.05	4.06	-.012	671	10	4
1.887	10.12	10.54	-.422	6.15	6.47	-.320	672	10	6
1.887	10.17	10.55	-.376	8.27	9.04	-.775	673	10	8
1.887	10.12	10.57	-.447	10.42	11.08	-.656	674	10	10
1.887	10.08	10.63	-.554	12.58	13.26	-.676	675	10	13
1.887	10.01	10.42	-.406	-.12	-.08	-.040	676	10	0

MREF RUN CONF PHI REYN TT8F
1.91 362 10 0 4.26 133.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
1.887	7.80	8.17	-.376	-2.17	-1.92	-.253	677	8	- 2
1.887	7.88	8.26	-.378	-.11	-.19	.078	678	8	0
1.887	7.94	8.16	-.215	2.00	1.75	.244	679	8	2
1.887	8.01	8.24	-.236	4.09	3.70	.386	680	8	4
1.887	8.02	8.33	-.316	6.19	6.09	.100	681	8	6
1.887	8.02	8.33	-.310	8.30	8.53	-.230	682	8	8
1.887	8.12	8.35	-.234	10.41	11.06	-.642	683	8	10
1.887	8.22	8.38	-.157	12.53	13.16	-.633	684	8	13

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
1.91 363 10 0 4.27 134.1

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.887	5.92	6.00	-.183	-2.19	-1.84	-.351	695	6	- 2
1.887	5.86	6.14	-.265	-.11	-.07	-.039	686	6	0
1.887	5.94	6.11	-.172	2.01	1.76	.252	687	6	2
1.887	6.00	6.17	-.169	4.11	3.60	.508	688	6	4
1.887	6.07	6.24	-.166	6.15	5.79	.359	689	6	6
1.887	6.14	6.06	.076	8.20	8.09	.101	690	6	8
1.887	6.12	6.15	-.025	10.38	10.62	-.248	691	6	10
1.887	6.11	6.20	-.096	12.56	13.09	-.530	692	6	13
1.887	373.20	6.14	*****	10.05	-.05	10.090	693		10

MREF RUN CONF PHI REYN TT8F
1.91 364 10 0 4.26 133.3

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.887	3.84	3.93	-.098	-2.23	-1.82	-.404	694	4	- 2
1.887	3.88	4.05	-.163	-.10	-.02	-.079	695	4	0
1.887	3.93	4.06	-.133	1.96	1.77	.191	696	4	2
1.887	3.97	4.06	-.091	4.01	3.65	.363	697	4	4
1.887	4.01	4.17	-.159	6.11	5.52	.587	699	4	6
1.887	4.04	3.96	.082	8.23	7.72	.507	700	4	8
1.887	4.02	4.11	-.089	10.38	10.16	.223	701	4	10
1.887	3.99	4.17	-.182	12.54	12.89	-.345	702	4	13
1.887	3.88	4.04	-.154	-.10	-.04	-.067	703	4	0

MREF RUN CONF PHI REYN TT8F
1.91 365 10 0 4.27 133.3

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.887	1.83	1.80	.025	-2.21	-1.82	-.388	704	2	- 2
1.887	1.92	1.99	-.073	-.10	-.03	-.068	705	2	0
1.887	1.86	1.91	-.050	1.96	1.71	.249	706	2	2
1.887	1.89	1.93	-.035	4.01	3.54	.471	707	2	4
1.887	1.95	1.94	.010	6.12	5.56	.555	708	2	6
1.887	2.00	1.88	.117	8.24	7.54	.692	709	2	8
1.887	1.95	2.07	-.114	10.39	9.72	.662	710	2	10
1.887	1.91	2.10	-.193	12.54	12.54	-.002	711	2	13
1.887	1.92	1.88	-.062	-.10	-.02	-.076	712	2	0

MREF RUN CONF PHI REYN TT8F
1.91 366 10 0 4.26 133.3

M8	ALPHA	ALFAV	DALPHA	BETA	RETAV	DBETA	RECORD	NAL	NBT
1.887	.77	.73	.036	-2.13	-1.80	-.334	713	1	- 2
1.887	.84	.82	.013	-.11	-.01	-.101	714	1	0
1.887	.86	.88	-.014	1.96	1.71	.252	715	1	2
1.887	.89	.92	.010	4.03	3.57	.454	716	1	4
1.887	.95	.89	.058	6.15	5.55	.601	717	1	6
1.887	1.00	.89	.109	8.27	7.54	.736	718	1	8
1.887	.97	1.06	-.097	10.42	9.71	.709	720	1	10
1.887	.94	1.07	-.129	12.17	11.75	.411	721	1	12
1.887	.84	.83	.010	-.11	-.03	-.089	722	1	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
1.91 367 10 0 4.21 133.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	-.23	-.26	.030	-2.14	-1.83	-.315	723	0	- 2
1.887	-.15	-.16	.006	-.12	-.03	-.095	724	0	0
1.887	-.10	-.15	.049	1.98	1.71	.275	725	0	2
1.887	-.05	-.13	.078	4.09	3.60	.479	726	0	4
1.887	-.01	-.07	.065	6.17	5.61	.555	727	0	6
1.887	.02	-.11	.134	8.26	7.68	.577	728	0	8
1.887	.11	.02	.092	10.39	9.79	.602	729	0	10
1.887	.14	.01	.127	11.14	10.61	.533	730	0	11
1.887	-.15	-.17	.019	-.12	-.01	-.106	731	0	0

MREF RUN CONF PHI REYN TTBF
1.91 365 10 0 4.28 133.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	-1.21	-1.29	.073	-2.19	-1.80	-.393	732	- 1	- 2
1.887	-1.14	-1.19	.057	-.11	-.03	-.079	733	- 1	0
1.887	-1.10	-1.20	.104	1.99	1.78	.210	734	- 1	2
1.887	-1.05	-1.17	.113	4.08	3.60	.478	735	- 1	4
1.887	-1.01	-1.10	.093	6.12	5.73	.392	736	- 1	6
1.887	-.97	-1.15	.182	8.17	7.87	.306	737	- 1	8
1.887	-.96	-1.00	.032	10.03	9.65	.376	738	- 1	10

MREF RUN CONF PHI REYN TTBF
1.91 364 10 0 4.27 134.4

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	-2.17	-2.34	.172	-2.25	-1.81	-.444	739	- 2	- 2
1.887	-2.13	-2.23	.100	-.14	-.02	-.120	740	- 2	0
1.887	-2.10	-2.27	.176	1.95	1.82	.135	741	- 2	2
1.887	-2.06	-2.21	.149	4.04	3.73	.310	742	- 2	4
1.887	-2.05	-2.16	.104	6.11	5.85	.262	743	- 2	6
1.887	-2.05	-2.16	.115	8.19	8.08	.115	744	- 2	8
1.887	-2.04	-2.15	.105	8.66	8.53	.127	746	- 2	9
1.887	-2.13	-2.25	.119	-.14	-.01	-.125	747	- 2	0

MREF RUN CONF PHI REYN TTBF
1.91 370 10 0 4.28 133.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
1.887	-.15	-.15	0.000	-.12	-.02	-.102	748	0	0
1.887	3.38	4.02	-.134	-.10	-.03	-.075	749	4	0
1.887	1.82	1.90	-.079	-.10	-.01	-.087	750	2	0
1.887	.84	.82	.018	-.11	-.02	-.093	751	1	0
1.887	-.15	-.16	.011	-.12	-.02	-.102	752	0	0
1.887	-1.14	-1.20	.061	-.11	-.02	-.087	753	- 1	0
1.887	-2.13	-2.24	.103	-.14	-.02	-.121	754	- 2	0
1.887	-.15	-.15	-.001	-.12	-.03	-.091	755	0	0

FIGURE 24 SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 303 7 10 4.28 128.0

NR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	.56	.64	-.076	-.11	-.01	-.104	33	1	0
2.077	.60	.82	-.225	11.95	12.57	-.621	34	1	12
2.077	.56	.88	-.326	9.93	9.94	-.018	35	1	10
2.077	.55	.74	-.188	7.92	7.58	.337	36	1	8
2.077	.55	.69	-.145	5.91	5.57	.347	37	1	6
2.077	.54	.63	-.141	3.92	3.73	.190	38	1	4
2.077	.54	.68	-.139	1.86	1.83	.024	39	1	2
2.077	.57	.65	-.076	-2.09	-1.86	-.226	41	1	-2
2.077	.81	.55	.254	-4.19	-3.66	-.526	42	1	-4
2.077	.56	.68	-.116	-.11	-.02	-.096	43	1	0

MREF RUN CONF PHI REYN TT8F
2.11 308 8 11 4.28 128.9

NR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.076	-.74	-.81	.066	.12	.14	-.024	98	-1	0
2.076	-.97	-.77	-.194	4.18	3.78	.393	99	-1	4
2.076	-.75	-.93	.086	2.09	1.98	.106	100	-1	2
2.076	-.74	-.83	.084	.12	.14	-.024	101	-1	0
2.076	-.72	-.84	.118	-1.86	-1.64	-.222	102	-1	-2
2.076	-.73	-.90	.174	-3.92	-3.40	-.518	103	-1	-4
2.076	-.73	-.98	.245	-5.91	-5.25	-.662	104	-1	-6
2.076	-.73	-1.01	.276	-7.91	-7.06	-.853	105	-1	-8
2.076	-.74	-1.09	.349	-9.93	-9.14	-.784	106	-1	-10
2.076	-.73	-1.02	.239	-11.95	-11.72	-.228	107	-1	-12
2.076	-.74	-.91	.070	.12	.15	-.025	108	-1	0

MREF RUN CONF PHI REYN TT8F
2.11 311 8 11 4.01 126.8

NR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.076	-.74	-.91	.163	.12	.14	-.024	137	-1	0
2.076	-.74	-.90	.153	.12	.14	-.023	138	-1	0
1.982	-.53	-.37	-.160	.14	.06	.077	139	-1	0
1.982	-.53	-.37	-.160	.14	.07	.070	140	-1	0
1.982	1.53	1.75	-.215	.10	.06	.041	141	2	0
1.982	1.53	1.75	-.215	.10	.05	.044	142	2	0
1.982	3.60	3.82	-.221	.08	.01	.068	143	4	0
1.982	3.60	3.83	-.237	.08	0.00	.072	144	4	0
1.982	5.67	5.91	-.239	.02	-.08	.101	145	6	0
1.982	5.67	5.89	-.221	.02	-.05	.063	146	6	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 321 4 1 4.27 129.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	0.00	-.12	.119	.72	.50	.226	235	0	1
2.077	-3.01	-3.17	.157	.70	.49	.215	236	- 3	1
2.077	-1.98	-2.15	.176	.70	.49	.206	237	- 2	1
2.077	-.99	-1.10	.114	.71	.49	.221	238	- 1	1
2.077	0.00	-.09	.095	.72	.48	.241	239	0	1
2.077	.99	.91	.079	.71	.50	.207	240	1	1
2.077	1.97	1.91	.059	.73	.51	.212	241	2	1
2.077	3.01	2.96	.054	.84	.50	.339	242	3	1
2.077	0.00	-.11	.115	.72	.49	.236	243	0	1

MREF RUN CONF PHI REYN TT8F
2.11 322 4 1 4.26 130.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	.06	-.04	.146	2.67	2.52	.145	244	0	3
2.077	0.00	-.12	.119	.73	.51	.220	245	0	1
2.077	-.04	-.15	.108	-1.30	-1.43	.132	246	0	- 1
2.077	-.03	-.15	.120	-3.34	-3.15	-.193	247	0	- 3
2.077	-.11	-.27	.166	-5.39	-4.83	-.556	248	0	- 5
2.077	-.18	-.36	.174	-7.44	-6.62	-.822	249	0	- 7
2.077	-.28	-.39	.116	-9.44	-8.78	-.656	250	0	- 9
2.077	-.32	-.40	.084	-10.32	-9.97	-.347	251	0	-10
2.077	0.00	-.12	.122	.73	.50	.227	252	0	1

MREF RUN CONF PHI REYN TT8F
2.11 334 10 0 4.25 131.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.076	-.12	-.22	.101	-.56	-.45	-.110	340	0	- 1
2.076	16.03	16.61	-.575	-.53	-.93	.403	341	16	- 1
2.076	14.02	14.50	-.479	-.55	-.93	.379	341	14	- 1
2.076	11.95	12.34	-.393	-.60	-.91	.312	342	12	- 1
2.076	9.93	10.12	-.254	-.55	-.91	.355	342	10	- 1
2.076	7.92	8.10	-.186	-.54	-.87	.327	343	8	- 1
2.076	5.92	5.98	-.064	-.54	-.56	.016	343	6	- 1
2.076	3.92	3.94	-.021	-.54	-.53	-.003	344	4	- 1
2.076	1.86	1.81	.049	-.53	-.47	-.065	344	2	- 1
2.076	.87	.77	.106	-.55	-.44	-.106	345	1	- 1
2.076	-.12	-.22	.101	-.56	-.42	-.139	345	0	- 1
2.076	-1.10	-1.23	.129	-.54	-.43	-.116	346	- 1	- 1
2.076	-2.09	-2.28	.184	-.57	-.41	-.160	346	- 2	- 1
2.076	-3.14	-3.28	.140	-.69	-.39	-.297	347	- 3	- 1
2.076	-.12	-.21	.092	-.56	-.43	-.129	347	0	- 1

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 335 10 0 4.24 132.3

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.076	-.18	-.29	.111	-2.50	-2.37	-.132	348	0	- 3
2.076	-.12	-.22	.104	-.56	-.44	-.119	349	0	- 1
2.076	-.08	-.17	.090	1.48	1.33	.158	349	0	1
2.076	.06	-.14	.202	7.60	6.91	.688	351	0	8
2.076	.16	.02	.138	9.61	9.34	.268	351	0	10
2.076	.19	.03	.163	10.31	10.11	.196	352	0	10
2.076	0.00	-.24	.235	5.56	5.11	.449	352	0	6

MREF RUN CONF PHI REYN TT8F
2.11 371 10 0 4.24 132.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	-.12	-.19	.079	-.55	-.46	-.088	756	0	- 1
2.077	3.92	3.88	.043	-.53	-.52	-.019	757	4	- 1
2.077	1.86	1.81	.052	-.53	-.42	-.106	758	2	- 1
2.077	.87	.77	.106	-.54	-.40	-.145	759	1	- 1
2.077	-.11	-.20	.092	-.55	-.37	-.186	760	0	- 1
2.077	-1.10	-1.24	.142	-.54	-.37	-.170	761	- 1	- 1
2.077	-2.09	-2.25	.156	-.57	-.33	-.237	762	- 2	- 1
2.077	-.12	-.23	.110	-.55	-.37	-.183	763	0	- 1

MREF RUN CONF PHI REYN TT8F
2.11 372 10 0 4.25 131.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	15.97	16.46	-.484	-2.58	-3.11	.530	764	16	- 3
2.077	16.03	16.59	-.553	-.53	-.89	.361	765	16	- 1
2.077	16.05	16.63	-.576	1.52	1.24	.277	766	16	2
2.077	16.04	16.62	-.581	3.56	3.55	.010	767	16	4
2.077	16.17	16.73	-.561	5.57	5.84	-.269	768	16	6
2.077	16.28	16.73	-.444	7.56	7.88	-.293	769	16	8
2.077	16.27	16.91	-.639	9.61	10.18	-.567	770	16	10
2.077	16.26	16.86	-.599	11.64	12.31	-.666	771	16	12
2.077	16.03	16.64	-.607	-.53	-.56	.037	772	16	- 1

MREF RUN CONF PHI REYN TT8F
2.11 373 10 0 4.25 132.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	13.97	14.41	-.435	-2.57	-3.12	.550	773	14	- 3
2.077	14.02	14.48	-.458	-.55	-.90	.355	774	14	- 1
2.077	14.04	14.54	-.502	1.45	1.33	.123	775	14	1
2.077	14.01	14.55	-.539	3.46	3.77	-.306	776	14	3
2.077	14.13	14.58	-.452	5.54	6.14	-.597	777	14	6
2.077	14.23	14.71	-.475	7.63	8.21	-.586	778	14	3
2.077	14.15	14.83	-.643	9.63	10.39	-.759	779	14	10
2.077	14.13	14.81	-.680	11.63	12.34	-.708	780	14	12
2.077	14.02	14.50	-.477	-.55	-.59	.042	781	14	- 1

FIGURE 2: SUMMARY OF 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 374 10 0 4.24 132.3

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	11.96	12.24	-.275	-2.56	-3.17	.609	782	12	- 3
2.077	11.95	12.35	-.406	-.59	-.88	.286	783	12	- 1
2.077	11.96	12.35	-.396	1.44	1.53	-.089	784	12	1
2.077	11.93	12.40	-.475	3.47	3.97	-.492	785	12	3
2.077	12.04	12.44	-.405	5.55	6.58	-1.035	786	12	6
2.077	12.13	12.59	-.454	7.62	8.74	-1.117	787	12	8
2.077	12.08	12.70	-.620	9.62	10.71	-1.084	788	12	10
2.077	12.03	12.69	-.664	11.62	12.54	-.911	789	12	12
2.077	11.95	12.38	-.428	-.60	-.84	.242	790	12	- 1

MREF RUN CONF PHI REYN TT8F
2.11 375 10 0 4.24 132.7

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	9.99	10.18	-.195	-2.44	-3.34	.897	791	10	- 2
2.077	10.05	10.23	-.183	-.55	-.87	.319	792	10	- 1
2.077	10.05	10.24	-.183	1.46	1.63	-.166	793	10	1
2.077	10.02	10.31	-.289	3.48	4.09	-.609	794	10	3
2.077	10.12	10.25	-.130	5.54	6.62	-1.072	795	10	6
2.077	10.22	10.48	-.258	7.60	8.59	-.989	796	10	8
2.077	10.17	10.55	-.375	9.63	10.58	-.950	797	10	10
2.077	10.13	10.59	-.465	11.67	12.60	-.934	798	10	12
2.077	10.05	10.25	-.201	-.55	-.78	.232	799	10	- 1

MREF RUN CONF PHI REYN TT8F
2.11 376 10 0 4.23 133.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	7.85	8.01	-.160	-2.53	-3.22	.688	800	8	- 3
2.077	7.92	8.09	-.175	-.54	-.84	.293	801	8	- 1
2.077	7.96	8.00	-.037	1.49	1.73	-.238	803	8	1
2.077	7.97	8.07	-.100	3.53	4.16	-.638	804	8	4
2.077	8.03	8.03	-.002	5.58	6.77	-1.193	805	8	6
2.077	8.06	8.11	-.046	7.64	8.45	-.813	806	8	8
2.077	8.17	8.33	-.167	9.62	10.64	-1.014	807	8	10
2.077	8.27	8.36	-.092	11.62	12.66	-1.033	808	8	12
2.077	7.92	8.06	-.138	-.54	-.58	.035	809	8	- 1

MREF RUN CONF PHI REYN TT8F
2.11 377 10 0 4.25 131.8

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.077	5.97	5.92	-.045	-2.56	-2.72	.166	810	6	- 3
2.077	5.92	5.98	-.065	-.54	-.59	.048	811	6	- 1
2.077	5.96	5.95	.008	1.50	1.75	-.248	812	6	2
2.077	5.96	5.93	.036	3.55	4.04	-.491	813	6	4
2.077	6.08	5.93	.145	5.54	6.05	-.511	815	6	6
2.077	6.18	6.03	.147	7.53	8.39	-.855	816	6	8
2.077	6.17	6.24	-.071	9.59	10.63	-1.042	817	6	10
2.077	6.16	6.29	-.130	11.64	12.70	-1.063	818	6	12
2.077	5.92	5.98	-.062	-.54	-.56	.021	819	6	- 1

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 378 10 0 4.25 131.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	3.89	3.94	.051	-2.59	-2.39	-.106	820	4	- 3
2.077	3.92	3.91	.013	-.53	-.53	-.007	821	4	- 1
2.077	3.95	3.94	.012	1.45	1.52	-.067	822	4	1
2.077	3.93	3.86	.077	3.44	3.53	-.092	823	4	3
2.077	4.02	3.89	.124	5.50	5.69	-.186	824	4	6
2.077	4.09	3.95	.135	7.56	8.01	-.447	825	4	8
2.077	4.07	4.13	-.068	9.60	10.41	-.810	826	4	10
2.077	4.04	4.22	-.173	11.63	12.79	-1.165	827	4	12
2.077	3.92	3.90	.020	-.53	-.50	-.031	828	4	- 1

MREF RUN CONF PHI REYN TT8F
2.11 379 10 0 4.24 132.6

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	1.88	1.73	.151	-2.57	-2.33	-.236	829	2	- 3
2.077	1.96	1.81	.044	-.53	-.44	-.088	830	2	- 1
2.077	1.88	1.85	.025	1.46	1.46	-.001	831	2	1
2.077	1.86	1.83	.025	3.45	3.51	-.060	832	2	3
2.077	1.95	1.80	.155	5.51	5.35	.162	833	2	6
2.077	2.04	1.87	.169	7.58	7.41	.170	834	2	8
2.077	2.00	2.11	-.110	9.60	10.16	-.553	835	2	10
2.077	1.96	2.15	-.185	11.63	12.64	-1.015	836	2	12
2.077	1.86	1.80	.063	-.53	-.45	-.086	837	2	- 1

MREF RUN CONF PHI REYN TT8F
2.11 380 10 0 4.23 133.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	.82	.70	.121	-2.50	-2.28	-.216	838	1	- 3
2.077	.87	.76	.098	-.54	-.42	-.124	839	1	- 1
2.077	.88	.81	.079	1.46	1.44	.015	840	1	1
2.077	.86	.76	.073	3.47	3.49	-.024	841	1	3
2.077	.96	.80	.158	5.54	5.24	.292	842	1	6
2.077	1.04	.89	.156	7.61	7.28	.330	843	1	8
2.077	1.01	1.13	-.115	9.63	9.83	-.204	844	1	10
2.077	.99	1.12	-.132	11.26	11.96	-.703	845	1	11
2.077	.87	.76	.117	-.54	-.41	-.137	846	1	- 1

MREF RUN CONF PHI REYN TT8F
2.11 381 10 0 4.22 134.1

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	-.18	-.31	.130	-2.50	-2.29	-.209	847	0	- 3
2.077	-.11	-.19	.082	-.55	-.41	-.144	848	0	- 1
2.077	-.08	-.16	.088	1.48	1.40	.081	849	0	1
2.077	-.08	-.22	.144	3.51	3.41	.099	850	0	4
2.077	0.00	-.17	.170	5.55	5.22	.329	851	0	6
2.077	.07	-.10	.166	7.60	7.11	.484	852	0	8
2.077	.16	.07	.090	9.60	9.50	.102	853	0	10
2.077	.19	.08	.112	10.33	10.56	-.224	854	0	10
2.077	-.11	-.21	.100	-.55	-.36	-.196	855	0	- 1

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.11 382 10 0 4.24 132.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECOPD	NAL	NRT
2.077	-1.16	-1.31	.147	-2.56	-2.24	-.320	856	- 1	- 3
2.077	-1.10	-1.22	.125	-.54	-.36	-.185	857	- 1	- 1
2.077	-1.07	-1.16	.110	1.48	1.42	.062	858	- 1	1
2.077	-1.09	-1.24	.150	3.51	3.38	.132	859	- 1	4
2.077	-1.00	-1.19	.190	5.51	5.21	.301	860	- 1	6
2.077	-.92	-1.13	.211	7.51	7.04	.474	861	- 1	9
2.077	-.92	-1.08	.166	9.24	8.91	.324	862	- 1	9
2.077	-1.10	-1.22	.126	-.54	-.36	-.180	863	- 1	- 1

MREF RUN CONF PHI REYN TT8F
2.11 383 10 0 4.24 132.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	-2.12	-2.36	.237	-2.61	-2.22	-.396	864	- 2	- 3
2.077	-2.08	-2.22	.149	1.45	1.38	.067	867	- 2	1
2.077	-2.10	-2.25	.152	3.47	3.39	.088	868	- 2	3
2.077	-2.04	-2.22	.174	5.50	5.19	.308	870	- 2	6
2.077	-2.00	-2.13	.128	7.53	7.02	.517	871	- 2	9
2.077	-2.00	-2.10	.105	7.92	7.33	.592	872	- 2	8
2.077	-2.09	-2.25	.159	-.57	-.36	-.217	873	- 2	- 1

MREF RUN CONF PHI REYN TT8F
2.11 384 10 0 4.23 133.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.077	-.12	-.22	.101	-.56	-.38	-.176	874	0	- 1
2.077	3.92	3.88	.045	-.54	-.47	-.066	875	4	- 1
2.077	1.86	1.80	.055	-.53	-.40	-.135	877	2	- 1
2.077	.87	.77	.105	-.55	-.39	-.161	878	1	- 1
2.077	-.12	-.19	.079	-.56	-.38	-.174	880	0	- 1
2.077	-1.10	-1.23	.128	-.54	-.39	-.159	881	- 1	- 1
2.077	-2.09	-2.25	.161	-.57	-.35	-.221	882	- 2	- 1
2.077	-.12	-.20	.083	-.56	-.39	-.171	883	0	- 1

MREF RUN CONF PHI REYN TT8F
2.31 304 7 10 4.16 124.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.277	.64	.41	.228	-.15	0.00	-.157	45	1	0
2.277	.67	.56	.114	11.90	12.95	-1.044	46	1	12
2.277	.63	.58	.054	9.88	10.83	-.952	47	1	10
2.277	.62	.46	.162	7.89	6.60	-.723	48	1	3
2.277	.62	.44	.182	5.88	6.25	-.378	49	1	6
2.277	.62	.43	.139	3.88	3.94	-.063	50	1	4
2.277	.61	.50	.117	1.82	1.96	-.139	51	1	2
2.277	.64	.43	.210	-.16	0.00	-.153	52	1	0
2.277	.65	.33	.274	-2.13	-1.91	-.222	53	1	- 2
2.277	.87	.31	.566	-4.23	-3.87	-.362	54	1	- 4
2.277	.64	.42	.215	-.15	0.00	-.154	55	1	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
2.31 309 6 11 4.14 126.7

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.277	-.81	-.59	-.223	.17	.08	.091	109	- 1	0
2.277	-1.03	-.57	-.460	4.23	2.74	1.415	110	- 1	4
2.277	-.81	-.60	-.217	2.14	2.02	.112	111	- 1	2
2.277	-.81	-.60	-.213	.17	.08	.083	112	- 1	0
2.277	-.79	-.67	-.120	-1.81	-1.79	-.022	113	- 1	- 2
2.277	-.79	-.70	-.091	-3.88	-3.71	-.162	114	- 1	- 4
2.277	-.80	-.74	-.060	-5.87	-5.61	-.254	115	- 1	- 6
2.277	-.80	-.71	-.093	-7.87	-7.79	-.080	116	- 1	- 8
2.277	-.81	-.77	-.039	-9.83	-10.16	.286	117	- 1	-10
2.277	-.85	-.72	-.131	-11.89	-12.64	.742	118	- 1	-12
2.277	-1.03	-.56	-.473	4.23	3.91	.317	119	- 1	4
2.277	-.81	-.62	-.197	.17	.07	.098	120	- 1	0

MREF RUN CONF PHI REYN TTBF
2.31 323 9 1 4.14 126.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.277	.05	-.08	.123	.80	.56	.235	253	0	1
2.277	-2.97	-3.07	.108	.78	.56	.214	254	- 3	1
2.277	-1.93	-2.08	.144	.77	.55	.222	255	- 2	1
2.277	-.94	-1.02	.078	.79	.55	.240	256	- 1	1
2.277	.05	-.06	.108	.80	.56	.241	257	0	1
2.277	1.03	.95	.080	.78	.58	.204	258	1	1
2.277	2.02	1.96	.065	.80	.63	.169	259	2	1
2.277	3.07	2.98	.083	.90	.68	.227	260	3	1
2.277	.05	-.07	.119	.80	.55	.248	261	0	1

MREF RUN CONF PHI REYN TTBF
2.31 324 9 1 4.13 127.1

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.277	.18	.03	.148	2.66	2.28	.381	262	0	3
2.277	.05	-.07	.118	.79	.54	.246	263	0	1
2.277	-.06	-.18	.124	-1.16	-1.12	-.041	264	0	- 1
2.277	-.21	-.23	.023	-3.16	-3.15	-.011	265	0	- 3
2.277	-.07	-.19	.123	-5.19	-5.10	-.090	266	0	- 5
2.277	-.11	-.23	.125	-7.23	-7.61	.383	267	0	- 7
2.277	-.22	-.33	.113	-9.50	-10.19	.684	268	0	-10
2.277	-.26	-.38	.119	-10.48	-11.31	.829	269	0	-10
2.277	.05	-.07	.122	.80	.56	.241	270	0	1

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTGF
2.31 336 10 0 4.09 131.5

MS	ALPHA	ALFAV	DALPHA	BETA	PETAV	DBETA	RECORD	NAL	NRT
2.277	-.15	-.26	.103	-.63	-.49	-.140	353	0	- 1
2.277	13.98	14.15	-.176	-.62	-.81	.107	354	14	- 1
2.277	11.90	12.04	-.143	-.67	-.82	.150	354	12	- 1
2.277	9.88	9.93	-.044	-.63	-.80	.172	355	10	- 1
2.277	7.98	7.91	-.032	-.62	-.75	.135	355	8	- 1
2.277	5.88	5.84	.040	-.62	-.69	.071	356	6	- 1
2.277	3.88	3.91	.076	-.61	-.55	-.062	356	4	- 1
2.277	1.82	1.76	.062	-.61	-.52	-.086	357	2	- 1
2.277	.94	.71	.125	-.62	-.51	-.113	357	1	- 1
2.277	-.15	-.26	.103	-.63	-.48	-.145	358	0	- 1
2.277	-1.14	-1.27	.128	-.62	-.50	-.120	358	- 1	- 1
2.277	-2.13	-2.24	.149	-.65	-.50	-.148	359	- 2	- 1
2.277	-3.18	-3.28	.094	-.76	-.48	-.274	359	- 3	- 1
2.277	-.15	-.24	.085	-.63	-.48	-.145	360	0	- 1
2.277	15.98	16.21	-.229	-.60	-.79	.189	360	16	- 1

MREF RUN CONF PHI REYN TTGF
2.31 337 10 0 4.10 130.5

MS	ALPHA	ALFAV	DALPHA	BETA	PETAV	DBETA	RECORD	NAL	NRT
2.277	-.15	-.27	.113	-.63	-.50	-.130	361	0	- 1
2.277	-.28	-.39	.103	-2.51	-2.34	-.169	361	0	- 3
2.277	-.06	-.16	.106	1.33	1.12	.210	362	0	1
2.277	-.08	-.12	.040	3.34	3.29	.051	362	0	3
2.277	-.04	-.15	.116	5.36	5.40	-.039	363	0	5
2.277	0.00	-.13	.121	7.40	7.91	-.511	363	0	7
2.277	.10	-.01	.108	9.68	10.62	-.935	364	0	10
2.277	.14	0.00	.142	10.52	11.45	-.931	364	0	11
2.277	-.15	-.28	.127	-.63	-.51	-.122	365	0	- 1

MREF RUN CONF PHI REYN TTGF
2.31 394 10 0 4.11 129.5

MS	ALPHA	ALFAV	DALPHA	BETA	PETAV	DBETA	RECORD	NAL	NRT
2.276	15.86	16.23	-.375	-2.58	-2.72	.145	976	16	- 3
2.276	15.99	16.30	-.310	-.61	-.82	.217	977	16	- 1
2.276	16.07	16.39	-.322	1.36	.79	.571	978	16	1
2.276	16.03	16.53	-.504	3.39	3.10	.290	979	16	3
2.276	16.12	16.67	-.552	5.37	5.13	.236	980	16	5
2.276	16.21	16.73	-.526	7.38	7.69	-.304	981	16	7
2.276	16.21	16.71	-.500	9.69	10.00	-.306	982	16	10
2.276	16.21	16.99	-.785	12.00	11.99	.014	983	16	12
2.276	15.99	16.28	-.294	-.61	-.62	.014	984	16	- 1

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CCONF PHI REYN TTBF
2.31 395 10 0 4.10 130.1

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.276	11.85	11.95	-.102	-2.57	-2.80	.226	985	12	- 3
2.276	11.90	12.06	-.161	-.67	-.79	.117	986	12	- 1
2.276	11.97	12.15	-.170	1.29	.95	.342	987	12	1
2.276	11.92	12.25	-.324	3.30	3.34	-.033	988	12	3
2.276	11.99	12.41	-.416	5.35	5.62	-.274	989	12	5
2.276	12.06	12.49	-.435	7.43	8.24	-.804	990	12	7
2.276	12.02	12.66	-.645	9.70	10.61	-.905	991	12	10
2.276	11.98	12.62	-.649	11.98	12.41	-.436	992	17	12
2.276	11.90	12.13	-.225	-.67	-.78	.107	993	12	- 1

MREF RUN CCONF PHI REYN TTBF
2.31 396 10 0 4.10 130.4

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.276	7.74	7.32	-.079	-2.54	-2.96	.426	995	8	- 3
2.276	7.87	7.96	-.083	-.62	-.75	.129	996	8	- 1
2.276	7.98	7.83	.150	1.34	1.39	-.044	997	8	1
2.276	7.98	8.05	-.067	5.38	6.75	-1.366	999	8	5
2.276	7.98	8.03	-.050	5.38	6.46	-1.084	1000	8	5
2.276	7.99	8.16	-.173	7.44	8.92	-1.475	1001	8	7
2.276	8.10	8.33	-.227	9.71	11.10	-1.387	1002	8	10
2.276	8.22	8.35	-.133	11.97	12.68	-.704	1003	8	12
2.276	7.87	7.93	-.054	-.62	-.74	.124	1004	8	- 1

MREF RUN CCONF PHI REYN TTBF
2.31 397 10 0 4.10 130.5

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.276	3.78	3.74	.044	-2.59	-2.81	.224	1005	4	- 3
2.276	3.88	3.86	.021	-.61	-.52	-.085	1006	4	- 1
2.276	3.97	3.96	.011	1.30	1.49	-.193	1007	4	1
2.276	3.94	3.97	-.030	3.27	4.04	-.767	1008	4	3
2.276	3.98	3.93	.050	5.31	6.34	-1.035	1009	4	5
2.276	4.02	4.03	-.014	7.36	8.82	-1.462	1010	4	7
2.276	4.01	4.13	-.117	9.67	11.03	-1.356	1011	4	10
2.276	4.00	4.27	-.268	11.98	12.84	-.862	1013	4	12
2.276	3.88	3.85	.036	-.61	-.51	-.102	1014	4	- 1

MREF RUN CCONF PHI REYN TTBF
2.31 398 10 0 4.11 129.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.276	1.78	1.67	.105	-2.57	-2.51	-.057	1015	2	- 3
2.276	1.82	1.80	.017	-.61	-.51	-.101	1016	2	- 1
2.276	1.90	1.89	.007	1.31	1.27	.034	1017	2	1
2.276	1.86	1.90	-.040	3.28	3.55	-.265	1018	2	3
2.276	1.92	1.85	.072	5.31	5.84	-.531	1019	2	5
2.276	1.97	1.92	.046	7.38	8.50	-1.122	1020	2	7
2.276	1.95	2.05	-.107	9.67	10.97	-1.294	1021	2	10
2.276	1.92	2.14	-.222	11.98	12.89	-.914	1022	2	12
2.276	1.82	1.77	.047	-.61	-.49	-.121	1023	2	- 1

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.31 349 10 0 4.11 130.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.276	-.15	-.20	.051	-.64	-.50	-.136	1024	0	- 1
2.276	3.88	3.84	.045	-.62	-.53	-.088	1025	4	- 1
2.276	.84	.77	.066	-.63	-.49	-.136	1027	1	- 1
2.276	-.15	-.21	.058	-.64	-.48	-.158	1028	0	- 1
2.276	-1.13	-1.21	.075	-.62	-.51	-.119	1029	- 1	- 1
2.276	-2.13	-2.21	.080	-.65	-.51	-.141	1030	- 2	- 1
2.276	-.15	-.20	.048	-.64	-.48	-.152	1031	0	- 1

MREF RUN CONF PHI REYN TT8F
2.31 400 10 0 3.07 111.7

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.276	-.15	-.21	.061	-.64	-.47	-.167	1032	0	- 1
2.276	-.07	-.07	0.000	3.34	3.33	.013	1033	0	3
2.176	-.13	-.21	.081	-.60	-.67	.076	1034	0	- 1
2.176	-.08	-.11	.038	3.42	3.28	.138	1035	0	3
2.076	-.11	-.20	.084	-.56	-.40	-.154	1036	0	- 1
2.076	-.08	-.17	.088	3.51	3.43	.079	1037	0	4
1.982	-.13	-.25	.122	-.34	-.12	-.217	1038	0	0
1.982	-.06	-.22	.161	3.79	3.48	.307	1039	0	4
1.887	-.15	-.17	.022	-.12	0.00	-.128	1040	0	0
1.887	-.04	-.07	.022	4.08	3.63	.449	1041	0	4
1.725	-.21	-.31	.103	.10	-.07	.172	1042	0	0
1.725	-.09	-.20	.125	4.16	3.72	.443	1043	0	4

MREF RUN CONF PHI REYN TT8F
2.41 340 10 0 3.74 124.0

M	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.390	9.82	9.96	-.037	.10	-.36	.464	379	10	0
2.390	7.82	7.83	-.008	.11	-.27	.385	380	8	0
2.390	5.82	5.79	.037	.11	-.22	.335	380	6	0
2.390	3.83	3.77	.054	.12	-.10	.220	381	4	0
2.390	.78	.66	.117	.11	-.09	.196	382	1	0
2.390	-.21	-.29	.079	.10	-.10	.201	382	0	0
2.390	-1.19	-1.28	.089	.11	-.13	.245	383	- 1	0
2.390	-2.19	-2.29	.104	.08	-.10	.183	383	- 2	0
2.390	-3.23	-3.26	.028	-.03	-.09	.057	384	- 3	0
2.390	1.77	1.72	.045	.12	-.08	.204	384	2	0
2.390	-.21	-.28	.075	.10	-.10	.201	385	0	0
2.390	-.21	-.27	.067	.10	-.11	.206	385	0	0
2.390	-.21	-.27	.066	.10	-.09	.191	386	0	0
2.390	-.21	-.28	.076	.10	-.10	.196	386	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
2.54 305 7 10 3.60 117.2

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	-.39	-.37	-.022	-.10	-.11	.008	56	0	0
2.555	-.35	-.17	-.187	11.95	13.10	-1.156	57	0	12
2.555	-.39	-.23	-.162	9.93	11.18	-1.251	58	0	10
2.555	-.40	-.26	-.140	7.92	9.22	-1.301	59	0	8
2.555	-.40	-.31	-.091	5.93	7.06	-1.155	60	0	6
2.555	-.41	-.31	-.100	3.93	4.86	-.932	61	0	4
2.555	-.41	-.35	-.064	1.87	2.37	-.495	62	0	2
2.555	-.39	-.35	-.038	-.10	-.10	-.001	63	0	0
2.555	-.38	-.39	.008	-2.07	-2.55	.473	64	0	-2
2.555	-.15	-.44	.283	-4.17	-4.89	.722	65	0	-4
2.555	-.39	-.37	-.021	-.10	-.10	-.005	66	0	0

MREF RUN CONF PHI REYN TTBF
2.54 310 8 11 3.57 120.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	.21	.19	.028	.11	.07	.042	121	0	0
2.555	0.00	.34	-.337	4.17	5.07	-.899	122	0	4
2.555	.21	.22	-.010	2.08	2.56	-.483	123	0	2
2.555	.23	.22	.008	1.09	1.32	-.232	124	0	1
2.555	.21	.20	.009	.11	.07	.038	125	0	0
2.555	.21	.20	.018	.11	.05	.056	126	0	0
2.555	0.00	.32	-.324	4.17	5.07	-.900	127	0	4
2.555	.21	.24	-.023	2.08	2.55	-.469	128	0	2
2.555	.21	.21	.005	.11	.06	.042	129	0	0
2.555	.24	.17	.063	-1.87	-2.38	.515	130	0	-2
2.555	.23	.13	.098	-3.93	-4.85	.918	131	0	-4
2.555	.23	.11	.121	-5.92	-7.04	1.126	132	0	-6
2.555	.23	.06	.166	-7.92	-9.14	1.228	133	0	-8
2.555	.21	.06	.159	-9.92	-11.09	1.173	134	0	-10
2.555	.18	-.03	.204	-11.94	-13.11	1.172	135	0	-12
2.555	.21	.19	.023	.11	.06	.053	136	0	0

MREF RUN CONF PHI REYN TTBF
2.54 312 9 1 2.32 84.8

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	.11	-.15	.262	-.29	-.36	.064	151	0	0
2.555	.11	-.16	.266	-.29	-.36	.070	152	0	0
2.555	.11	-.15	.254	-.29	-.37	.074	153	0	0
2.555	.11	-.15	.254	-.29	-.36	.066	154	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.54 313 9 1 2.33 84.7

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	.11	-.16	.273	-.29	-.39	.092	155	0	0
2.555	.11	-.17	.274	-.29	-.39	.094	156	0	0
2.555	.11	-.15	.257	-.29	-.40	.101	157	0	0
2.555	.11	-.15	.254	-.29	-.41	.112	158	0	0
2.555	.11	-.16	.266	-.29	-.41	.112	159	0	0
2.555	.11	-.15	.254	-.29	-.37	.076	160	0	0
2.555	.11	-.15	.262	-.29	-.39	.097	161	0	0
2.555	.11	-.15	.250	-.29	-.37	.079	162	0	0
2.555	.11	-.15	.257	-.29	-.38	.083	163	0	0
2.555	.11	-.15	.261	-.29	-.41	.120	164	0	0
2.555	.11	-.15	.262	-.29	-.40	.106	165	0	0
2.555	.11	-.15	.254	-.29	-.40	.103	166	0	0
2.555	.11	-.16	.267	-.29	-.40	.105	167	0	0
2.555	.11	-.14	.250	-.29	-.42	.126	168	0	0
2.555	.11	-.15	.258	-.29	-.41	.116	169	0	0
2.555	.11	-.15	.258	-.29	-.43	.132	170	0	0

MREF RUN CONF PHI REYN TT8F
2.54 314 9 1 2.32 86.7

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	.11	-.16	.269	-.29	-.42	.125	171	0	0
2.555	.11	-.16	.265	-.29	-.40	.105	172	0	0
2.555	.11	-.17	.274	-.29	-.42	.122	173	0	0
2.555	.11	-.15	.257	-.29	-.40	.101	174	0	0
2.555	.11	-.16	.265	-.29	-.40	.110	175	0	0
2.555	.11	-.15	.258	-.29	-.39	.099	176	0	0
2.555	.11	-.15	.257	-.29	-.39	.096	177	0	0
2.555	.11	-.16	.265	-.29	-.39	.092	178	0	0

MREF RUN CONF PHI REYN TT8F
2.54 315 9 1 2.30 88.8

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NBT
2.555	.11	-.15	.257	-.29	-.36	.068	179	0	0
2.555	.11	-.14	.250	-.29	-.37	.078	180	0	0
2.555	.11	-.14	.249	-.29	-.35	.054	181	0	0
2.555	.11	-.15	.254	-.29	-.37	.073	182	0	0
2.555	.11	-.14	.246	-.29	-.36	.068	183	0	0
2.555	.11	-.14	.246	-.29	-.35	.059	184	0	0
2.555	.11	-.13	.242	-.29	-.36	.064	185	0	0
2.555	.11	-.14	.249	-.29	-.36	.063	186	0	0

FIGURE 28 SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.54 310 ✓ 1 2.19 87.3

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	.11	-.15	.253	-.29	-.36	.064	187	0	0
2.555	-2.88	-3.11	.227	-.25	-.20	-.054	188	-3	0
2.555	-1.86	-2.12	.262	-.26	-.22	-.033	189	-2	0
2.555	-.68	-1.09	.209	-.24	-.27	.031	190	-1	0
2.555	.11	-.13	.236	-.23	-.31	.073	191	0	0
2.555	1.04	.87	.219	-.25	-.33	.089	192	1	0
2.555	2.06	1.84	.240	-.22	-.32	.100	193	2	0
2.555	3.13	2.87	.262	-.11	-.37	.262	194	3	0
2.555	4.18	3.88	.301	0.00	-.43	.430	195	4	0
2.555	.12	-.13	.247	-.23	-.32	.089	196	0	0

MREF RUN CONF PHI REYN TTEF
2.54 325 9 1 3.59 118.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	-.01	-.12	.109	-.23	-.33	.100	271	0	0
2.555	-3.02	-3.09	.068	-.25	-.21	-.036	272	-3	0
2.555	-1.99	-2.08	.092	-.25	-.24	-.011	273	-2	0
2.555	-1.00	-1.06	.062	-.24	-.29	.051	274	-1	0
2.555	-.01	-.09	.082	-.23	-.30	.072	275	0	0
2.555	.97	.87	.098	-.24	-.33	.086	276	1	0
2.555	1.95	1.86	.099	-.23	-.35	.125	277	2	0
2.555	3.00	2.88	.125	-.12	-.38	.258	278	3	0
2.555	-.01	-.13	.114	-.23	-.31	.081	279	0	0

MREF RUN CONF PHI REYN TT8F
2.54 320 ✓ 1 3.58 119.0

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	.10	-.06	.158	1.64	2.13	-.491	280	0	2
2.555	-.01	-.11	.102	-.23	-.30	.065	281	0	0
2.555	-.10	-.22	.121	-2.18	-2.58	.397	282	0	-2
2.555	-.08	-.17	.092	-4.11	-5.07	.959	283	0	-4
2.555	-.11	-.22	.115	-6.14	-7.15	1.012	284	0	-6
2.555	-.13	-.25	.119	-8.17	-9.19	1.013	285	0	-8
2.555	-.25	-.37	.124	-10.06	-11.25	1.187	286	0	-10
2.555	-.18	-.38	.200	-10.89	-11.98	1.097	287	0	-11
2.555	.11	-.11	.218	-.23	-.32	.088	288	0	0

MREF RUN CONF PHI REYN TT8F
2.54 327 ✓ 1 3.58 119.6

MB	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	.11	-.12	.230	-.23	-.31	.080	289	0	0
2.555	.11	-.12	.226	-.23	-.32	.084	290	0	0
2.555	.11	-.13	.234	-.23	-.32	.088	291	0	0
2.555	.11	-.13	.234	-.23	-.32	.088	292	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TT8F
2.54 328 7 1 3.62 114.0

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAI	NRT
2.555	.11	-.15	.253	-.23	-.30	.064	293	0	0
2.555	.11	-.14	.249	-.23	-.31	.078	294	0	0
2.555	.11	-.14	.249	-.23	-.31	.078	295	0	0
2.555	.11	-.15	.258	-.23	-.32	.084	296	0	0

MREF RUN CONF PHI REYN TT8F
2.54 330 10 0 3.55 122.5

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAI	NRT
2.555	-.10	-.23	.127	.39	.54	-.150	365	0	0
2.555	16.02	16.05	-.032	.42	.23	.141	366	16	0
2.555	14.01	14.06	-.056	.40	.15	.249	366	14	0
2.555	11.94	11.96	-.010	.36	.19	.171	367	12	0
2.555	9.93	9.94	.088	.40	.20	.198	367	10	0
2.555	7.92	7.82	.102	.41	.28	.131	368	8	0
2.555	5.93	5.70	.138	.41	.43	-.019	368	6	0
2.555	3.93	3.79	.143	.41	.50	-.090	369	4	0
2.555	1.97	1.76	.118	.42	.57	-.158	369	2	0
2.555	.89	.75	.136	.40	.53	-.132	370	1	0
2.555	-.10	-.20	.100	.39	.54	-.145	370	0	0
2.555	-1.08	-1.20	.121	.41	.51	-.101	371	-1	0
2.555	-2.08	-2.19	.113	.38	.42	-.039	371	-2	0
2.555	-3.12	-3.17	.050	.27	.42	-.151	372	-3	0
2.555	-.10	-.19	.091	.39	.54	-.149	372	0	0

MREF RUN CONF PHI REYN TT8F
2.54 339 10 0 3.55 122.9

M8	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAI	NRT
2.555	-.21	-.26	.054	-1.48	-1.90	.418	373	0	-1
2.555	-.10	-.21	.110	.40	.53	-.134	373	0	0
2.555	-.02	-.09	.075	2.35	2.95	-.599	374	0	2
2.555	-.03	-.14	.104	4.29	5.28	-.909	375	0	4
2.555	-.01	-.12	.111	6.31	7.40	-1.088	376	0	6
2.555	.02	-.10	.119	8.32	9.58	-1.260	376	0	8
2.555	.13	.02	.111	10.22	11.49	-1.268	377	0	10
2.555	.18	.03	.146	10.92	12.07	-1.149	377	0	11
2.555	-.10	-.21	.110	.39	.53	-.133	378	0	0
2.555	-.10	-.22	.117	.29	.42	-.126	378	0	0

FIGURE 21 SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
2.54 386 10 0 3.58 118.6

MA	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	15.91	16.08	-.172	-1.55	-1.84	.297	905	16	- 2
2.555	16.02	16.12	-.107	.42	.23	.196	906	16	0
2.555	16.08	16.17	-.090	2.38	2.12	.264	907	16	2
2.555	16.05	16.22	-.172	4.33	4.10	.233	908	16	4
2.555	16.13	16.33	-.200	6.33	6.21	.114	909	16	6
2.555	16.20	16.60	-.403	8.31	8.20	.107	910	16	8
2.555	16.22	16.89	-.676	10.22	10.14	.082	911	16	10
2.555	16.23	16.98	-.755	12.14	11.95	.192	912	16	12
2.555	16.02	16.18	-.163	.42	.25	.165	913	16	0

MREF RUN CONF PHI REYN TTBF
2.54 387 10 0 3.57 120.2

MA	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	11.91	11.93	-.019	-1.54	-1.76	.219	914	12	- 2
2.555	11.94	12.03	-.092	.36	.20	.157	915	12	0
2.555	11.99	12.05	-.052	2.31	2.22	.095	916	12	2
2.555	11.95	12.23	-.277	4.25	4.16	.088	917	12	4
2.555	12.01	12.26	-.248	6.30	6.25	.052	918	12	6
2.555	12.06	12.40	-.338	8.35	8.28	.065	919	12	8
2.555	12.03	12.51	-.471	10.23	10.15	.087	920	12	10
2.555	12.00	12.82	-.818	12.12	12.11	.012	921	12	12
2.555	11.94	11.91	.030	.36	.20	.165	922	12	0

MREF RUN CONF PHI REYN TTBF
2.54 388 10 0 3.56 121.0

MA	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	7.81	7.83	-.022	-1.50	-1.80	.303	923	8	- 2
2.555	7.92	7.88	.045	.41	.25	.162	924	8	0
2.555	8.01	7.91	.097	2.36	2.39	-.024	925	8	2
2.555	8.01	7.98	.025	4.30	4.49	-.192	926	8	4
2.555	8.01	8.02	-.012	6.33	6.71	-.379	927	8	6
2.555	8.01	8.10	-.094	8.36	8.92	-.554	928	8	8
2.555	8.13	8.23	-.097	10.24	10.90	-.660	929	8	10
2.555	8.26	8.35	-.089	12.12	12.64	-.514	930	8	12
2.555	7.92	7.85	.075	.41	.48	-.075	931	8	0
2.555	7.81	7.81	-.003	-1.50	-1.61	.105	932	8	- 2

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

MREF RUN CONF PHI REYN TTBF
2.54 389 10 0 3.55 121.8

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	3.35	3.76	.076	-1.56	-1.87	.314	933	4	- 2
2.555	3.93	3.61	.127	.42	.49	-.063	934	4	0
2.555	4.00	3.95	.056	2.32	2.65	-.328	935	4	2
2.555	3.96	3.90	.073	4.22	5.07	-.849	936	4	4
2.555	4.01	3.95	.062	6.26	7.48	-1.222	937	4	6
2.555	4.04	4.01	.021	8.29	9.71	-1.417	938	4	8
2.555	4.04	4.00	-.045	10.21	11.37	-1.164	939	4	10
2.555	4.04	4.18	-.142	12.12	13.01	-.836	940	4	12
2.555	3.93	3.61	.122	.41	.47	-.057	941	4	0

MREF RUN CONF PHI REYN TTBF
2.54 390 10 0 3.54 122.3

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	1.95	1.75	.096	-1.54	-1.96	.415	942	2	- 2
2.555	1.97	1.76	.090	.42	.54	-.122	943	2	0
2.555	1.94	1.94	-.001	2.33	2.90	-.575	944	2	2
2.555	1.90	1.91	-.009	4.22	5.36	-1.131	945	2	4
2.555	1.95	1.89	.054	6.27	7.77	-1.496	946	2	6
2.555	1.99	1.94	.049	8.30	9.82	-1.524	947	2	8
2.555	1.96	2.10	-.141	12.13	13.17	-1.040	949	2	12
2.555	1.98	2.07	-.092	10.22	11.53	-1.316	950	2	10
2.555	1.97	1.78	.095	.42	.57	-.150	951	2	0

MREF RUN CONF PHI REYN TTBF
2.54 391 10 0 3.55 122.1

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	-1.08	-1.16	.075	.41	.51	-.106	952	- 1	0
2.555	-1.19	-1.19	-.006	-1.53	-1.78	.246	953	- 1	- 2
2.555	-1.02	-1.03	.015	2.36	2.82	-.465	954	- 1	2
2.555	-1.04	-1.09	.042	4.29	4.99	-.702	955	- 1	4
2.555	-1.01	-1.08	.076	6.27	7.17	-.901	956	- 1	6
2.555	-.97	-1.07	.093	8.24	9.53	-1.285	957	- 1	8
2.555	-.95	-1.03	.082	9.87	11.25	-1.379	958	- 1	10
2.555	-1.08	-1.15	.070	.41	.49	-.082	959	- 1	0

MREF RUN CONF PHI REYN TTBF
2.54 392 10 0 3.55 122.4

MR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DBETA	RECORD	NAL	NRT
2.555	-2.15	-2.19	.040	-1.58	-1.61	.030	960	- 2	- 2
2.555	-2.08	-2.15	.069	.38	.42	-.036	961	- 2	0
2.555	-2.01	-2.03	.018	2.32	2.59	-.264	962	- 2	2
2.555	-2.05	-2.10	.054	4.25	4.65	-.398	963	- 2	4
2.555	-2.05	-2.08	.038	6.26	7.01	-.748	964	- 2	6
2.555	-2.05	-2.06	.008	8.27	9.44	-1.171	965	- 2	8
2.555	-2.04	-2.05	.013	8.64	9.89	-1.250	966	- 2	9
2.555	-2.08	-2.16	.079	.38	.44	-.059	967	- 2	0

FIGURE 2: SUMMARY OF NASA/ARC 9-X 7-FOOT WIND TUNNEL DATA (CONTINUED)

WREF RUN CONF PHI REYN TTBF
 2.54 393 10 0 3.55 122.2

NR	ALPHA	ALFAV	DALPHA	BETA	BETAV	DRETA	RECORD	NAL	NBT
2.555	-.10	-.16	.058	.40	.53	-.128	968	0	0
2.555	3.93	3.81	.121	.42	.50	-.082	969	4	0
2.555	1.87	1.81	.068	.42	.56	-.145	970	2	0
2.555	.89	.79	.102	.41	.55	-.143	971	1	0
2.555	-.10	-.16	.066	.40	.56	-.162	972	0	0
2.555	-1.08	-1.16	.075	.41	.50	-.087	973	- 1	0
2.555	-2.07	-2.14	.068	.38	.41	-.034	974	- 2	0
2.555	-.10	-.17	.067	.40	.53	-.134	975	0	0

FIGURE 2: SUMMARY OF NASA/ARC 9- X 7-FOOT WIND TUNNEL DATA (CONCLUDED)

Appendix A

Flow Angularity Corrections/Checks

The data from the NASA/ARC test of the AFFTC NBIU were checked to determine that flow angularity corrections had been made correctly. As is standard with NASA/ARC data, the true angle of attack, α , and true angle of sideslip, β , were determined from the geometric angle, A , and geometric angle, B , measured on the model support hardware in the A-plane and B-plane respectively. The true values were calculated by adding "delta" values for stream angle to the geometric values as shown in equations (A1) and (A2).

$$\alpha = A + \Delta A_{SA} \quad (A1)$$

$$\beta = B + \Delta B_{SA} \quad (A2)$$

Both tunnels used for the NBIU tests had model support hardware which had center-of-rotation in the A-plane located on the model. Because the model did not translate in the A-plane, the corrections for stream angle were a function only the B-plane geometric angle and an intercept (variable with Mach number) as shown in equations (A3) and (A4).

$$\Delta A_{SA} = (\partial \Delta A_{SA} / \partial B) B + \Delta A_{SA}^0 \quad (A3)$$

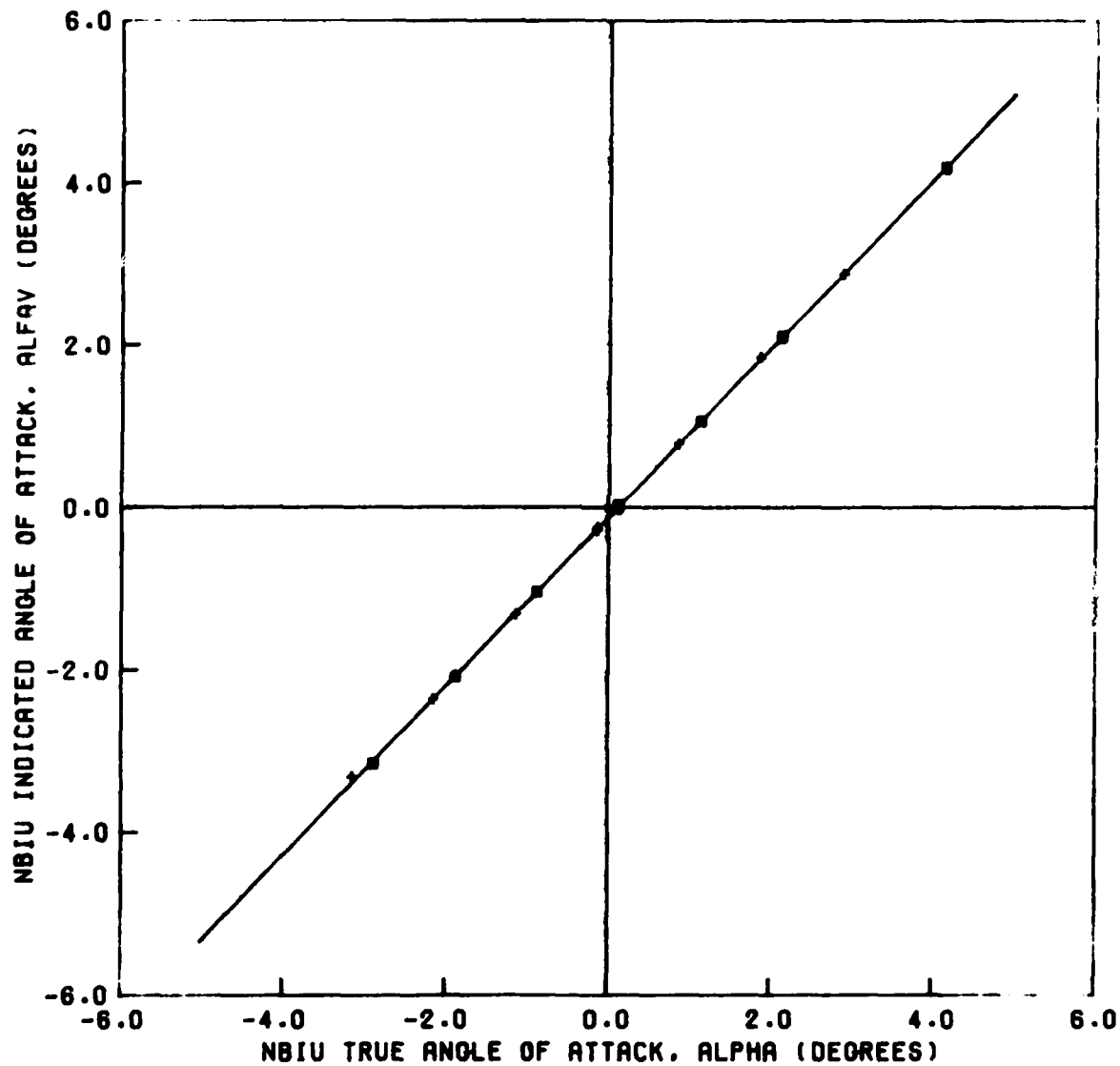
$$\Delta B_{SA} = (\partial \Delta B_{SA} / \partial B) B + \Delta B_{SA}^0 \quad (A4)$$

The intercepts and partial derivations in equations (A3) and (A4) were determined by the test engineer based on knowledge of the system and special test data taken especially for flow angularity corrections. The intercepts were determined from some assumed physical property; for instance at zero angle of sideslip the side force should be zero or at zero lift coefficient the angle of attack should be equal on upright and inverted runs. For the NBIU test specifically, it was assumed that the error in indicated angle of attack or indicated angle of sideslip should be independent of roll orientation at zero angles of attack and sideslip. ΔA_{SA}^0 and ΔB_{SA}^0 were adjusted until assumption was verified. The partial derivatives were evaluated based on the assumption that the error in indicated angle of attack or indicated angle of sideslip were not affected by rolling the NBIU $\pm 90^\circ$ with α and β maintained at 0° .

The flow-angularity-test data, procedures, and corrections were investigated extensively to evaluate the effectiveness of the corrections and impact on test data. NASA/ARC had obtained data from

upright, inverted, and $\pm 90^\circ$ roll orientations at 14 Mach numbers to determine flow angularity corrections. The corrections determined from these tests were entered into data reduction procedures in terms of a "table look-up" as opposed to the usual procedure of determining an average number for the test. The NBIU calibration data resulting from application of all corrections were plotted for angle of attack in figure A1 and for angle of sideslip in figure A2. Conclusions from the entire analysis of flow angularity corrections were executed with great care. With the exception of a few unexpected runs, the data were highly consistent and within specified accuracy.

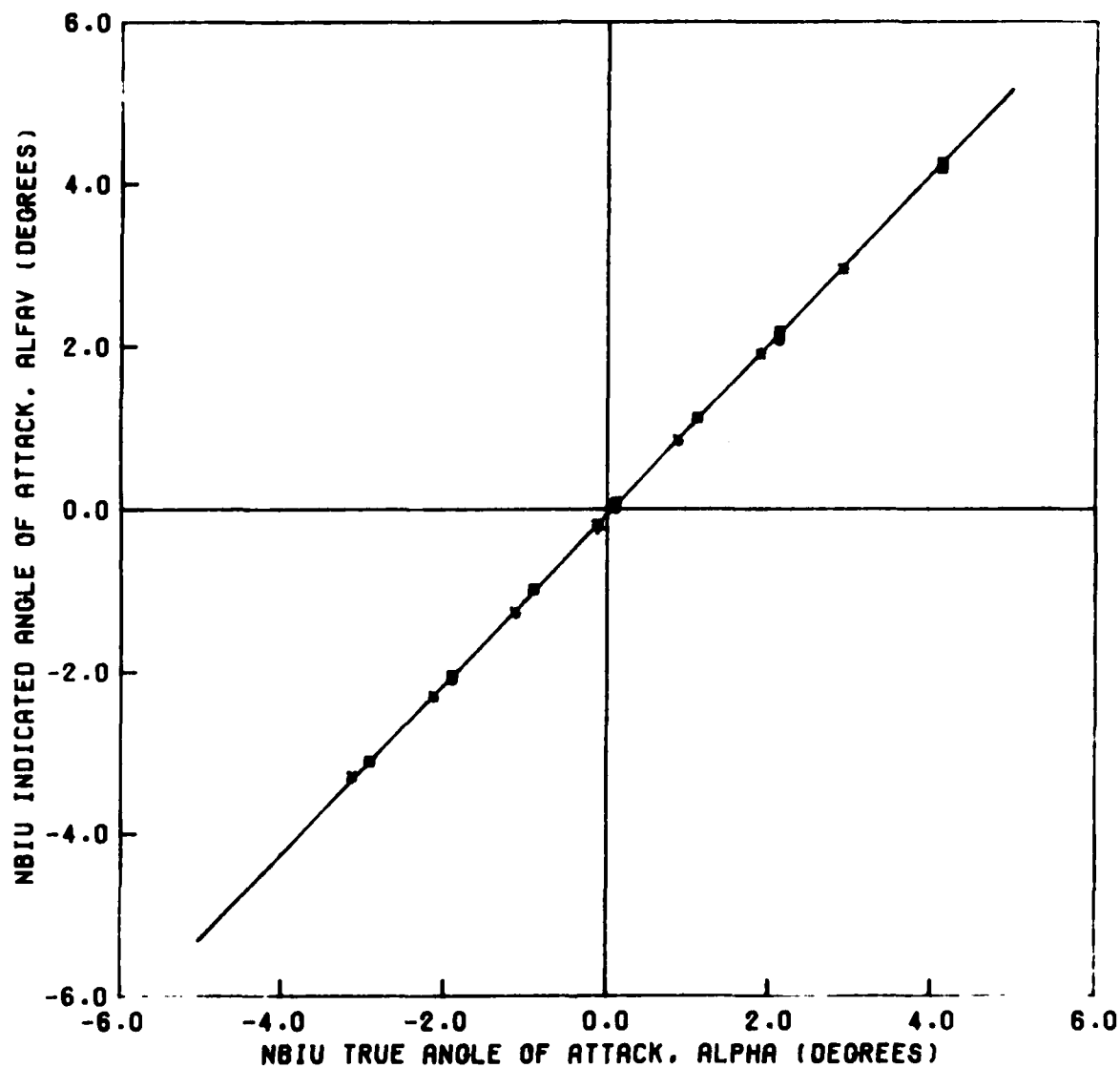
SYMBOL	CONFIGURATION	RUN	Re/L (/FOOT)
+	INVERTED DATA	45	2.0×10^6
□	UPRIGHT DATA	80	2.0×10^6
○	UPRIGHT DATA	150	2.0×10^6
▲	UPRIGHT DATA	166	2.0×10^6
—	DATA FAIRING		



A) REFERENCE MACH NUMBER= 0.40

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS

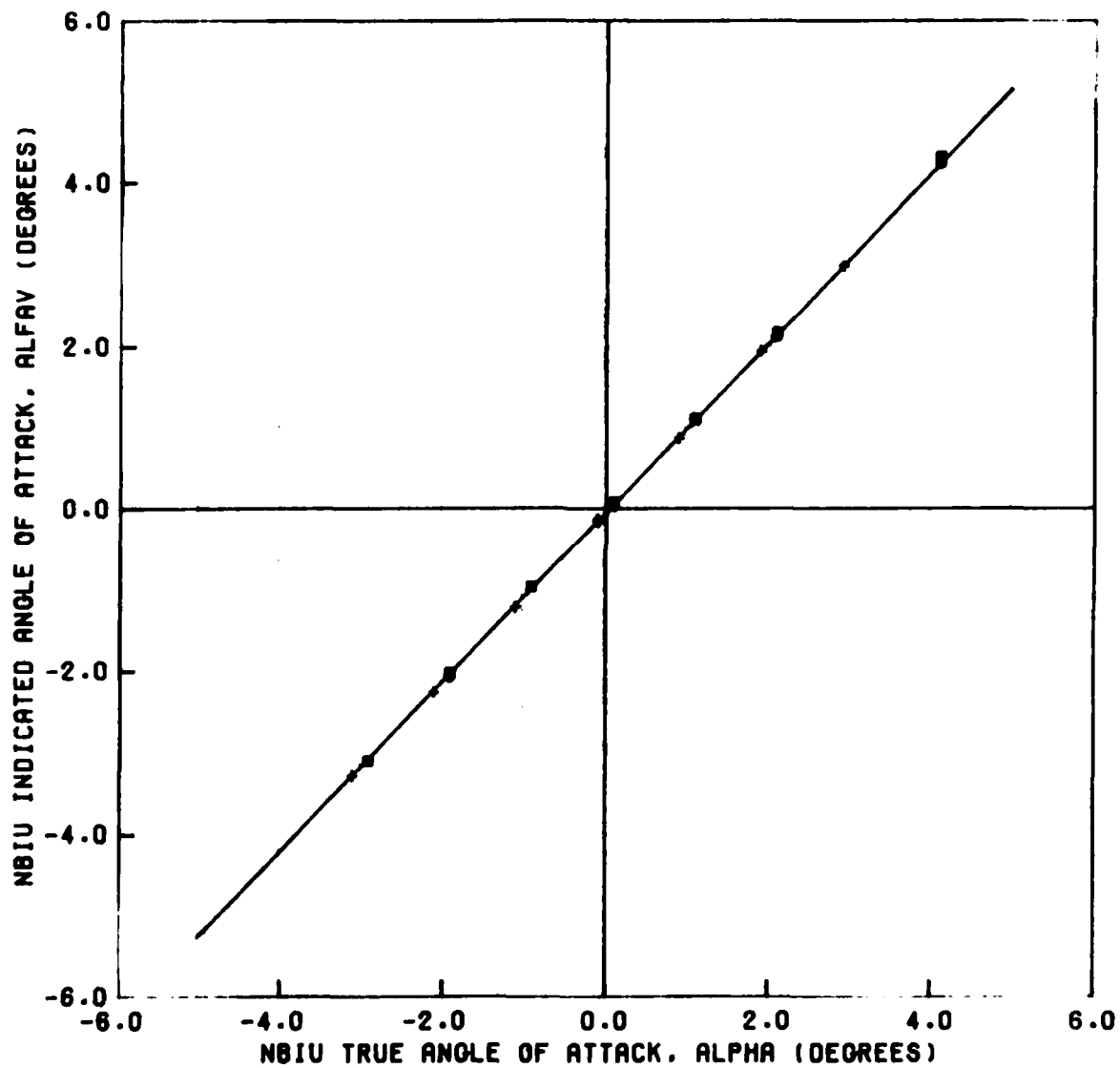
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	26	2.6×10^6
X	INVERTED DATA	47	2.6×10^6
□	UPRIGHT DATA	79	2.6×10^6
○	UPRIGHT DATA	133	2.6×10^6
▲	UPRIGHT DATA	149	2.6×10^6
—	DATA FAIRING		



B) REFERENCE MACH NUMBER= 0.60

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

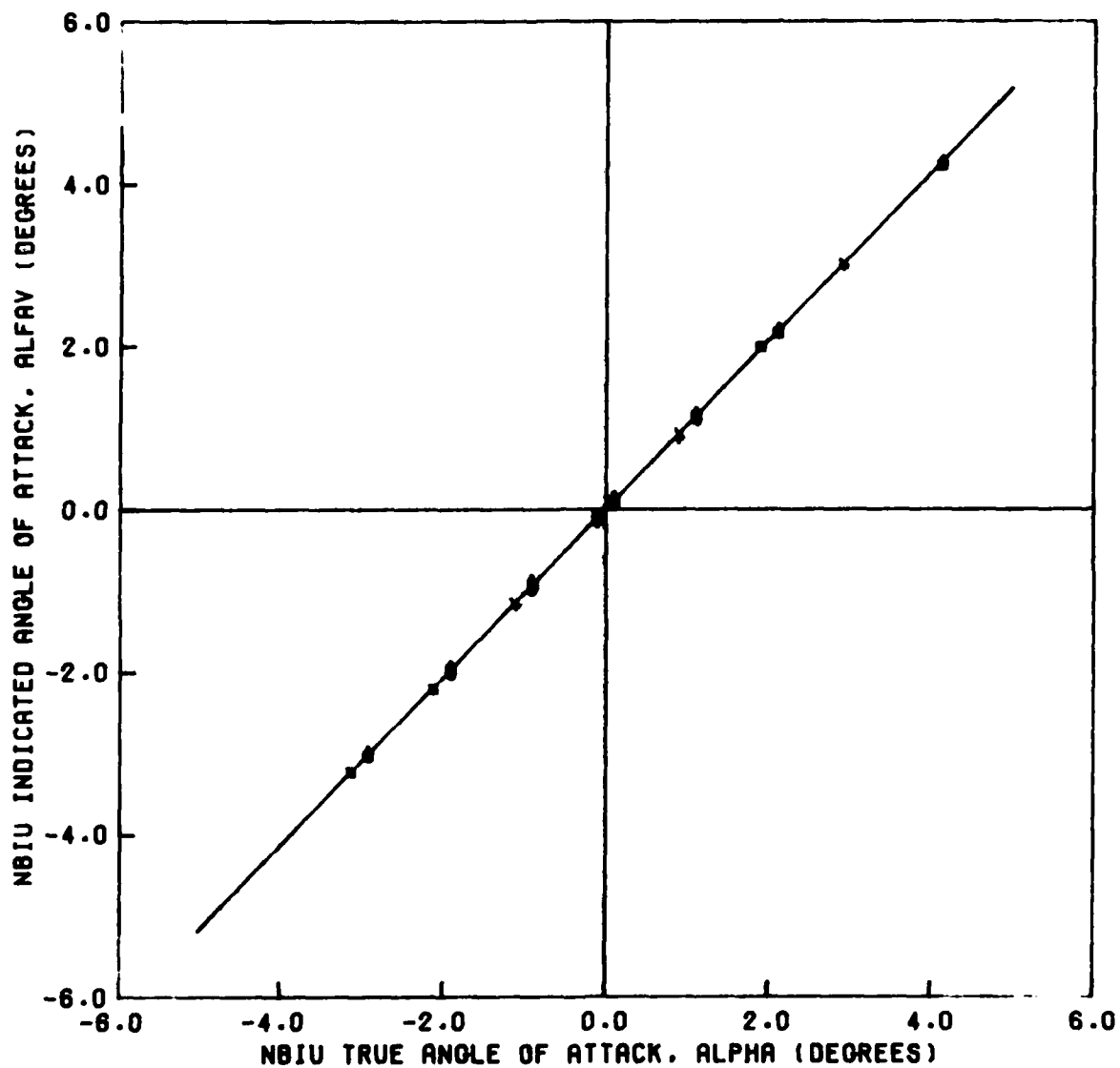
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	28	2.1×10^6
□	UPRIGHT DATA	78	2.1×10^6
○	UPRIGHT DATA	250	2.1×10^6
▲	UPRIGHT DATA	116	2.1×10^6
◆	UPRIGHT DATA	132	2.1×10^6
—	DATA FAIRING		



C) REFERENCE MACH NUMBER= 0.80

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

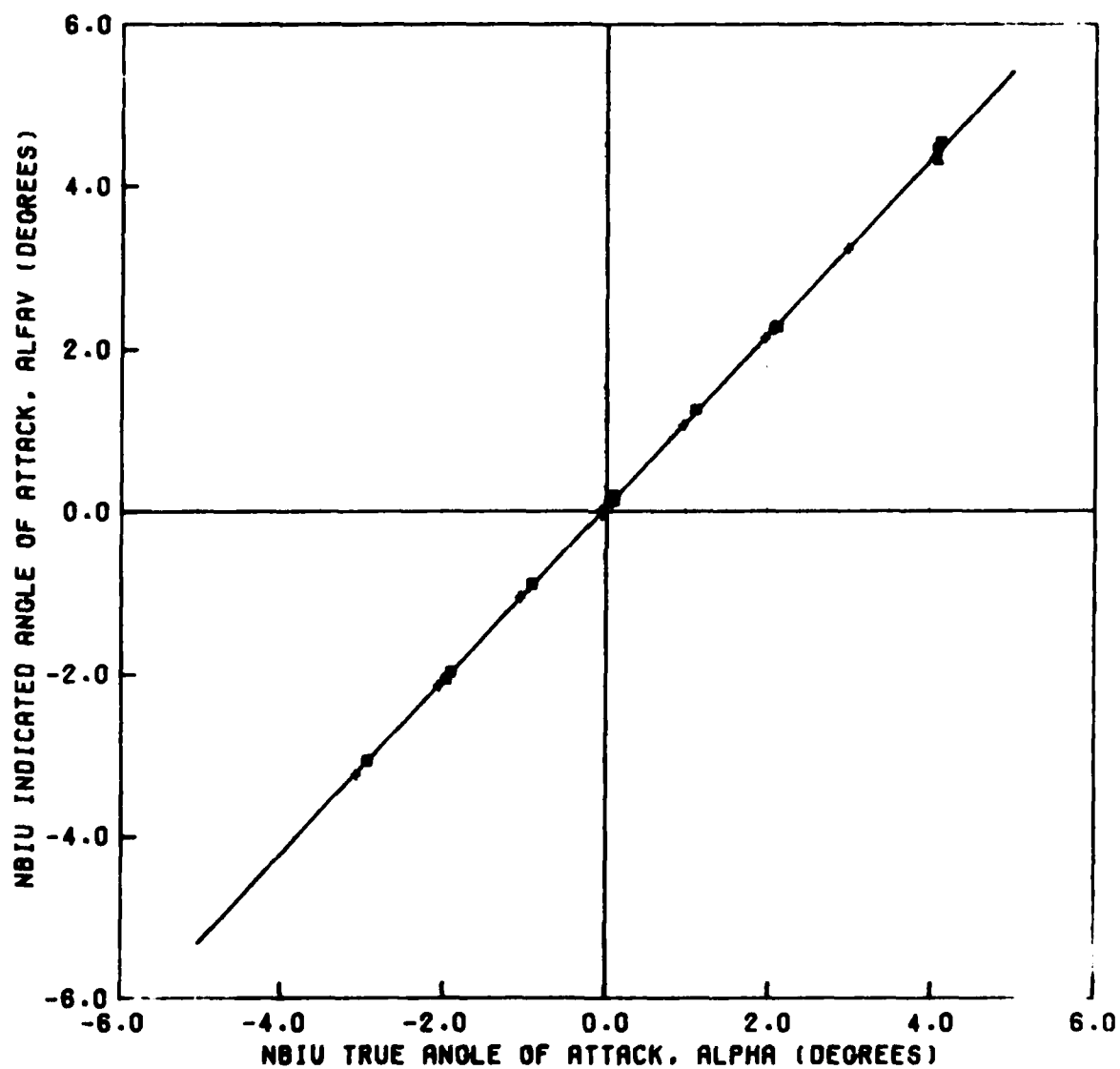
SYMBOL	CONFIGURATION	RUN	Re/L (/FOOT)
+	INVERTED DATA	30	2.0×10^6
x	INVERTED DATA	44	5.5×10^6
□	UPRIGHT DATA	77	2.0×10^6
○	UPRIGHT DATA	81	2.0×10^6
▲	UPRIGHT DATA	239	5.5×10^6
◇	UPRIGHT DATA	240	3.3×10^6
—	DATA FAIRING		



D) REFERENCE MACH NUMBER= 0.90

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

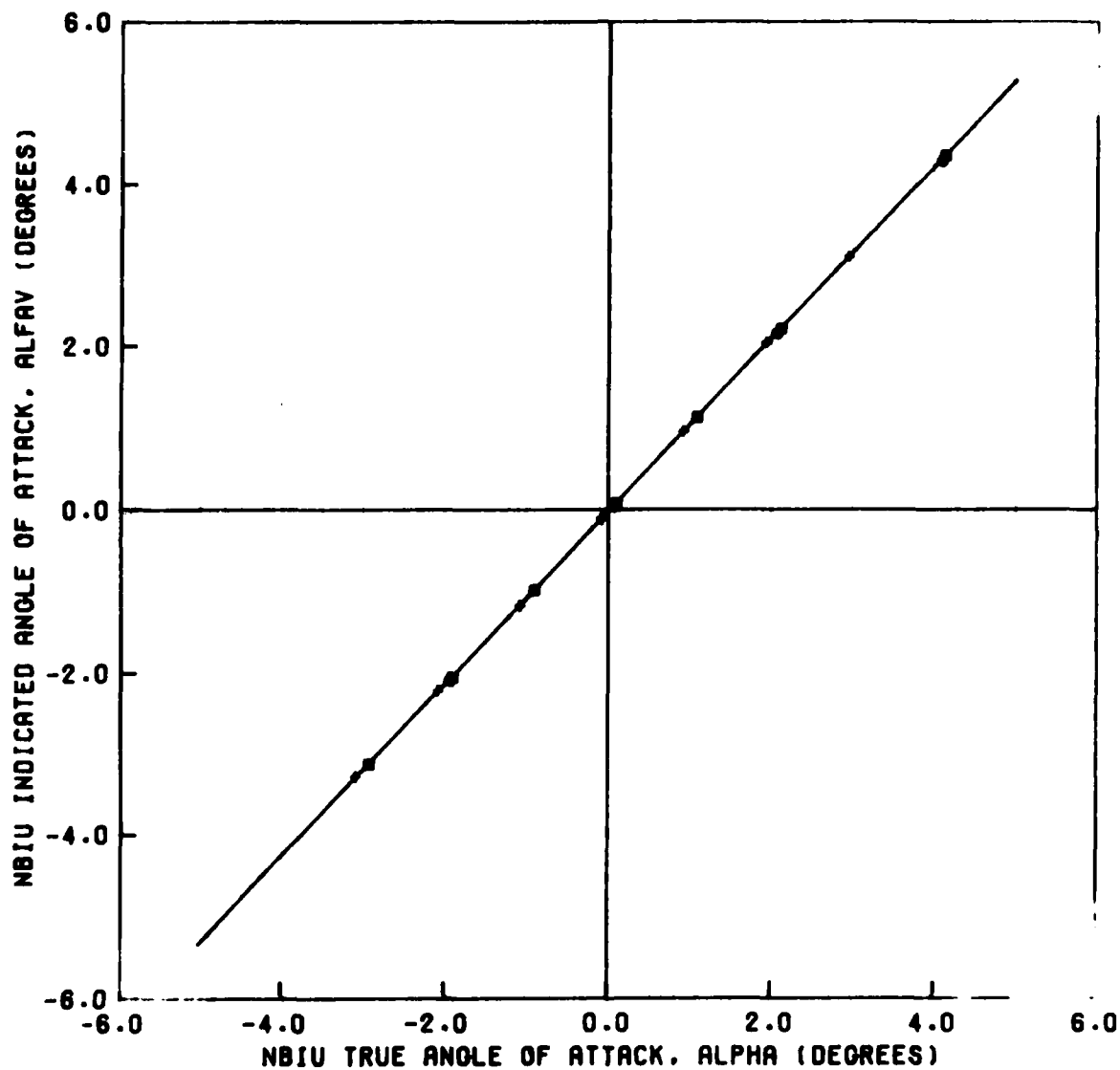
SYMBOL	CONFIOURATION	RUN	Re/L (/FOOT)
+	INVERTED DATA	32	1.8×10^6
□	UPRIGHT DATA	76	1.8×10^6
○	UPRIGHT DATA	98	1.8×10^6
▲	UPRIGHT DATA	107	1.8×10^6
◇	UPRIGHT DATA	115	1.8×10^6
—	DATA FAIRING		



E) REFERENCE MACH NUMBER= 0.95

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

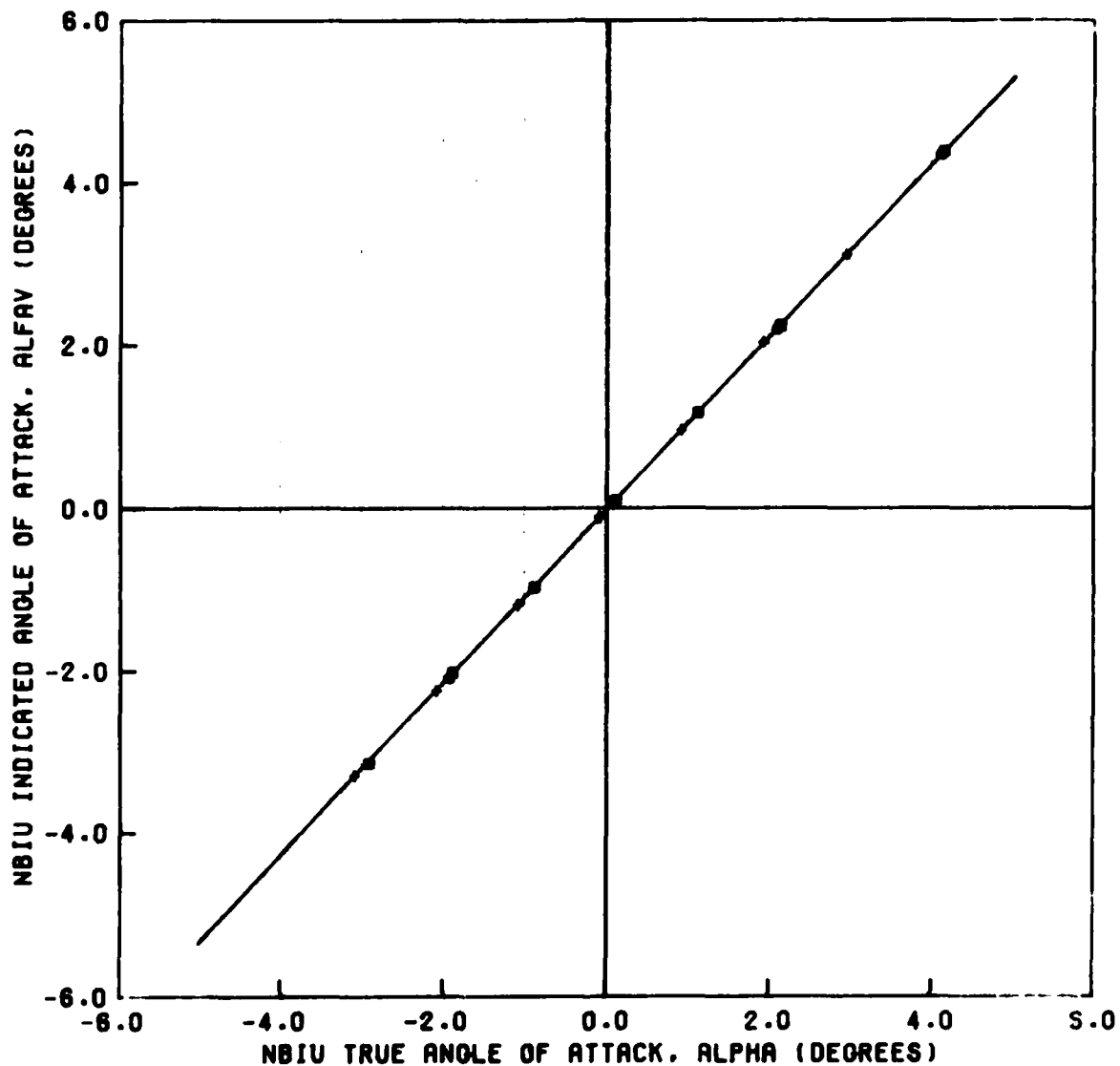
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	34	2.8×10^6
□	UPRIGHT DATA	75	2.8×10^6
○	UPRIGHT DATA	168	2.8×10^6
▲	UPRIGHT DATA	184	2.8×10^6
—	DATA FAIRING		



F) REFERENCE MACH NUMBER= 1.05

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

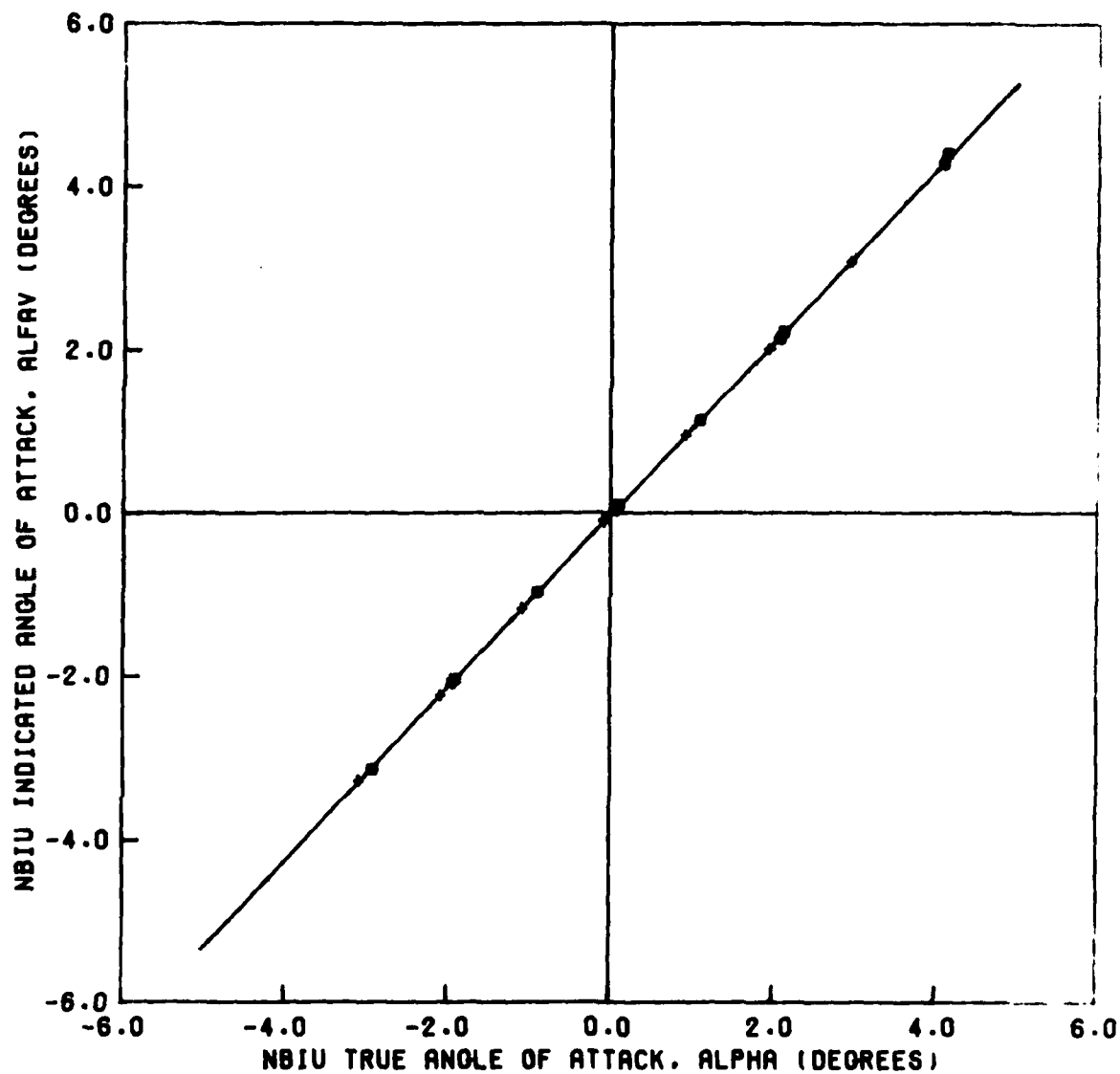
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	36	2.9×10^6
□	UPRIGHT DATA	74	2.9×10^6
○	UPRIGHT DATA	220	2.9×10^6
▲	UPRIGHT DATA	236	2.9×10^6
—	DATA FAIRING		



0) REFERENCE MACH NUMBER= 1.10

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

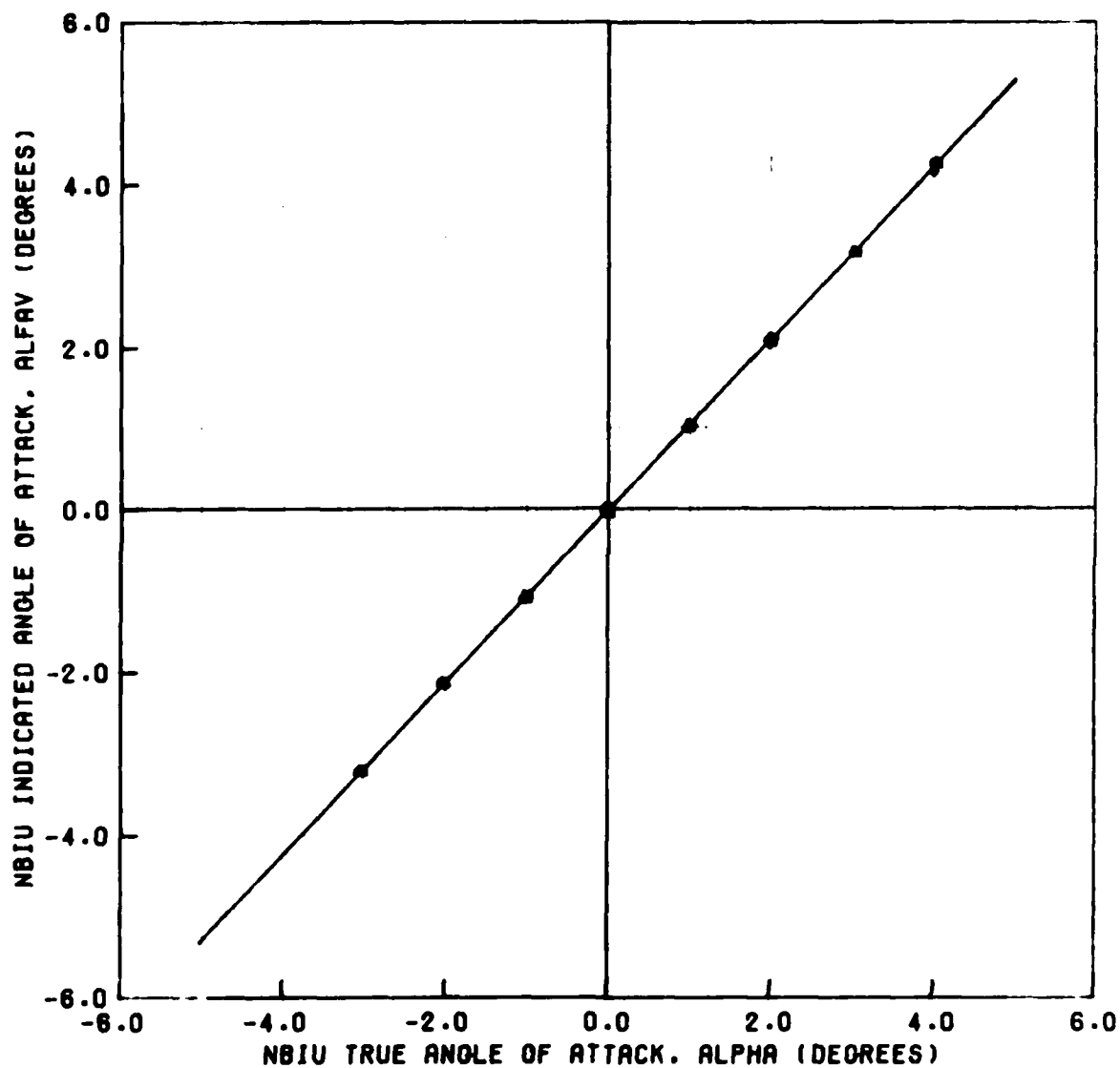
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	38	3.3×10^6
□	UPRIGHT DATA	73	3.3×10^6
○	UPRIGHT DATA	203	3.3×10^6
▲	UPRIGHT DATA	219	3.3×10^6
—	DATA FAIRING		



H) REFERENCE MACH NUMBER= 1.20

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

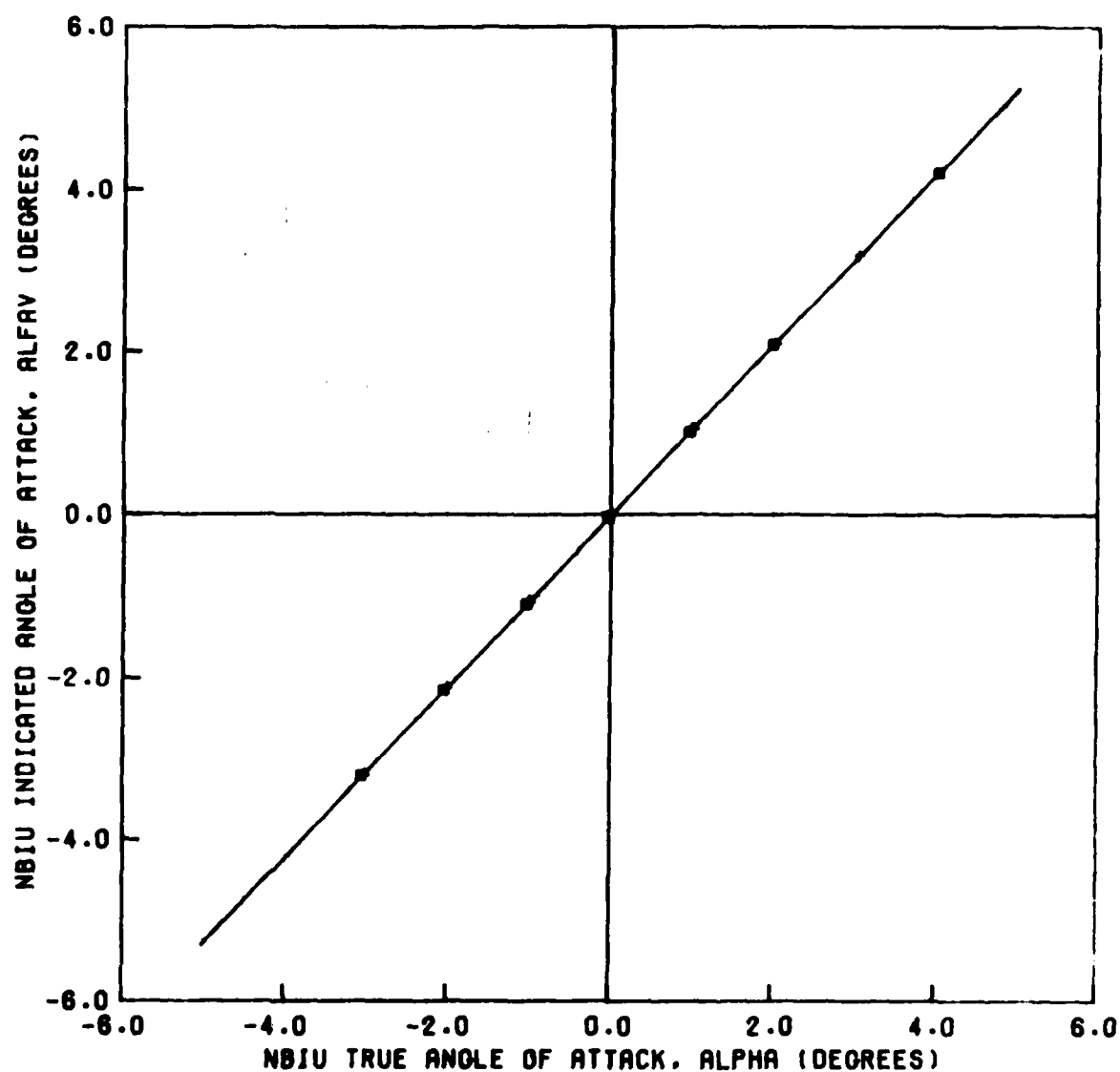
SYMBOL	CONFIGURATION	RUN	Re/L (1/FOOT)
+	INVERTED DATA	40	3.7×10^6
x	INVERTED DATA	43	2.4×10^6
□	UPRIGHT DATA	72	2.4×10^6
○	UPRIGHT DATA	201	3.7×10^6
▲	UPRIGHT DATA	202	8.0×10^6
◇	UPRIGHT DATA	238	2.4×10^6
—	DATA FAIRING		



1) REFERENCE MACH NUMBER= 1.30

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

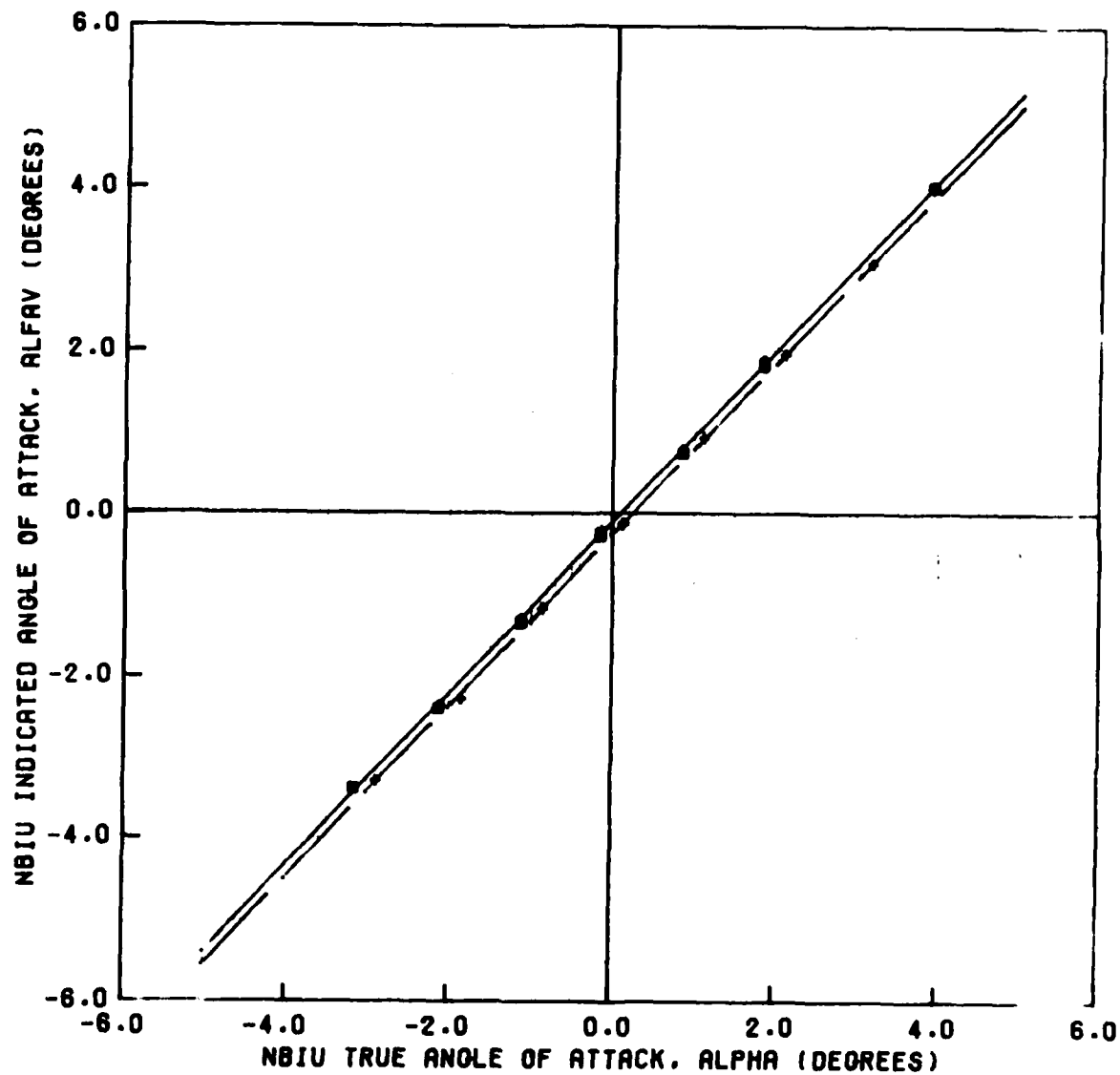
SYMBOL	CONFIGURATION	RUN	Re/L (/FOOT)
+	INVERTED DATA	42	4.2×10^6
□	UPRIGHT DATA	237	4.2×10^6
—	DATA FAIRING		



J) REFERENCE MACH NUMBER= 1.40

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

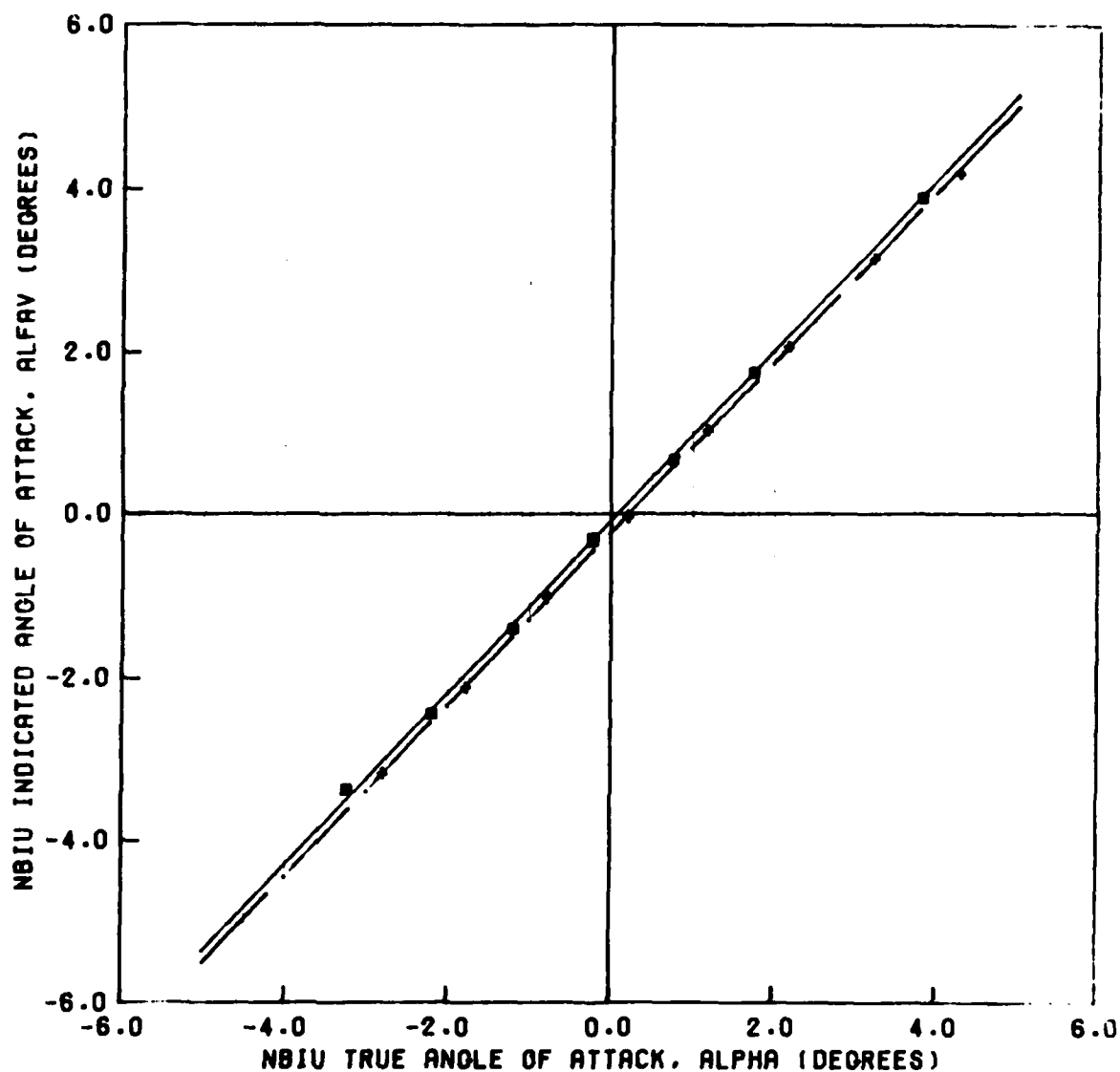
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	317	4.0×10^6
□	UPRIGHT DATA	330	4.0×10^6
○	UPRIGHT DATA	343	4.0×10^6
▲	UPRIGHT DATA	356	4.0×10^6
◇	UPRIGHT DATA	401	2.0×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



K) REFERENCE MACH NUMBER= 1.51

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

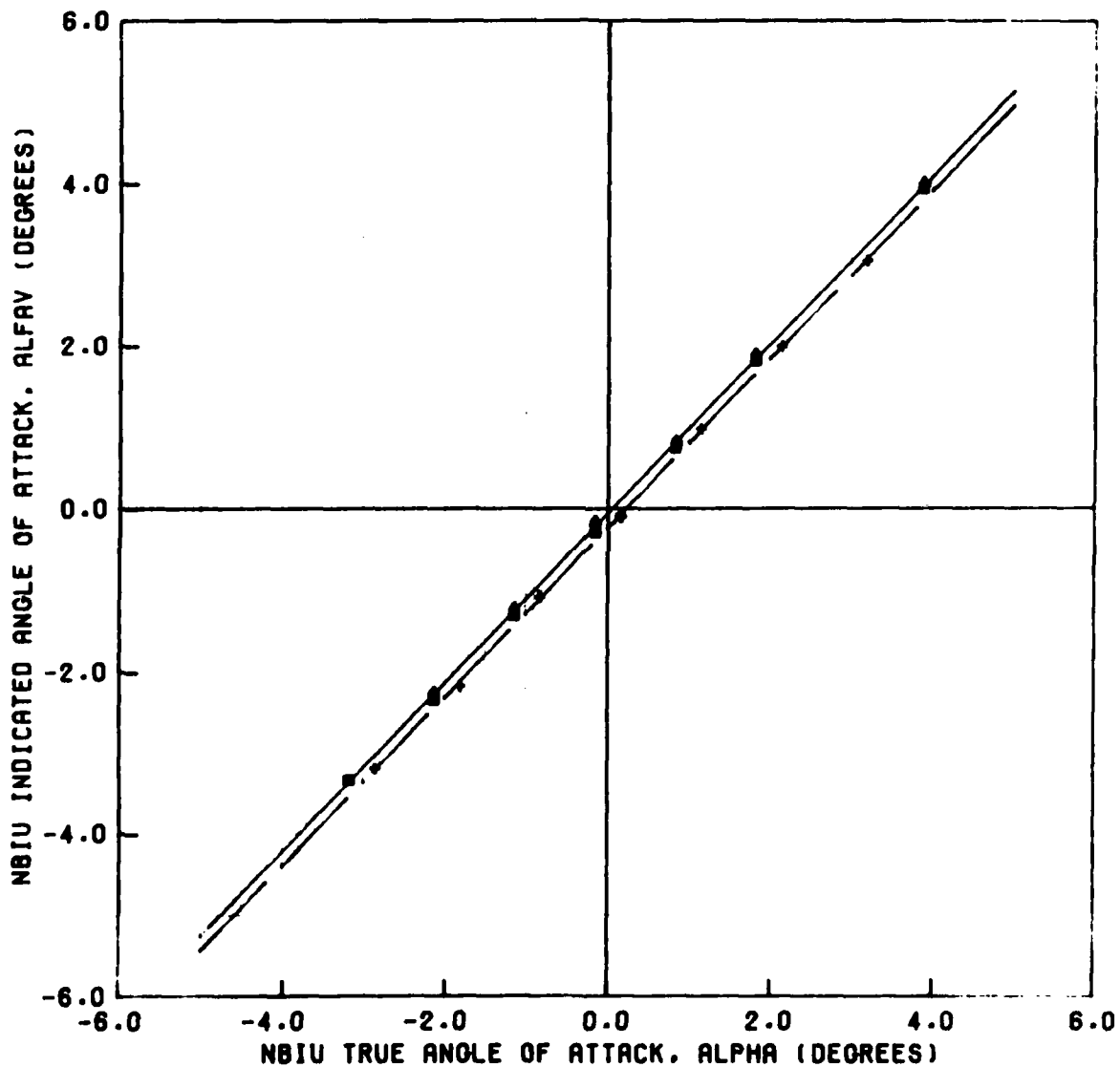
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	329	3.7×10^6
□	UPRIGHT DATA	341	3.7×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



L) REFERENCE MACH NUMBER= 1.71

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

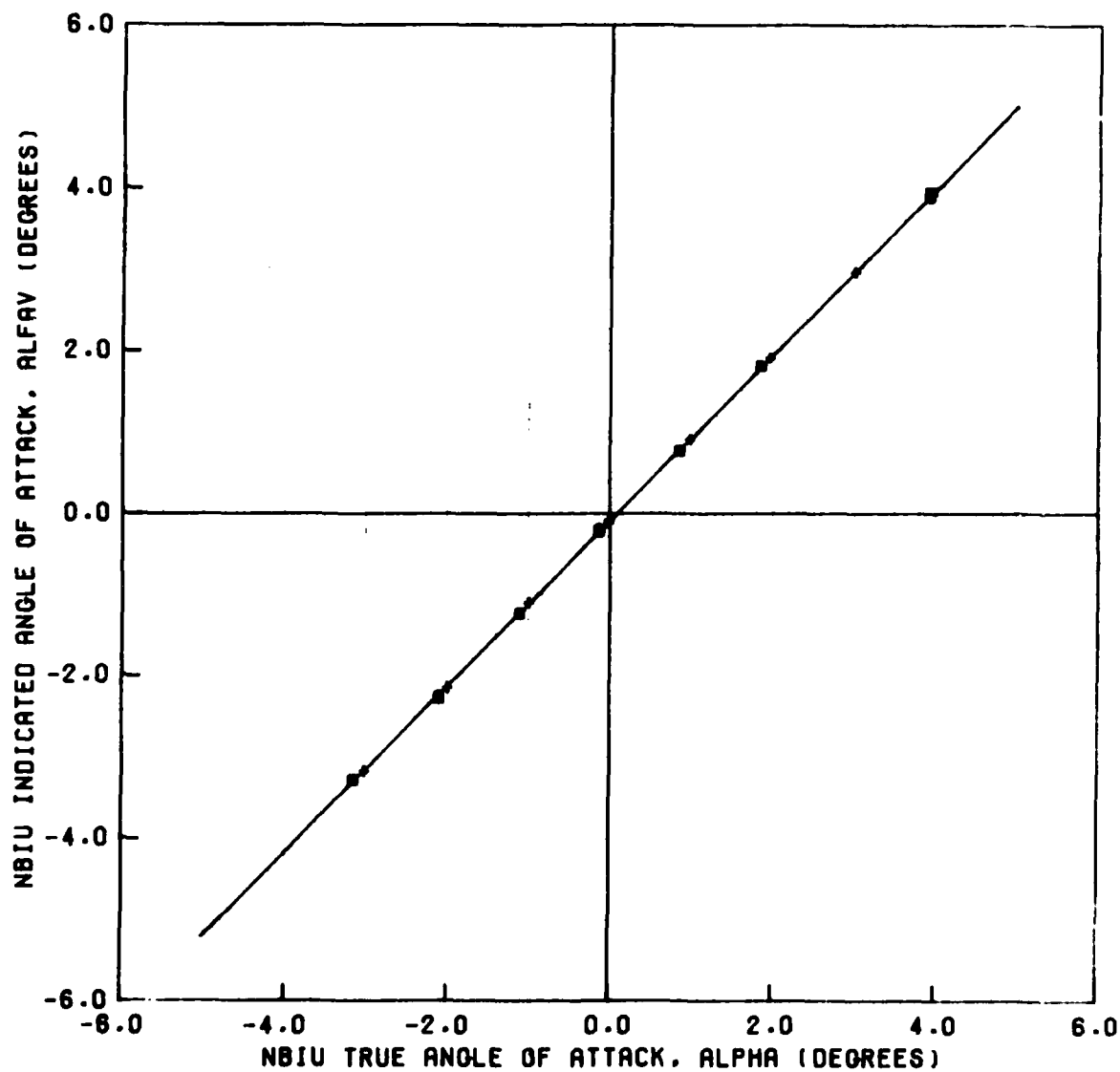
SYMBOL	CONFIGURATION	RUN	Re/L (1/FOOT)
+	INVERTED DATA	318	4.3×10^6
□	UPRIGHT DATA	332	4.3×10^6
○	UPRIGHT DATA	357	4.3×10^6
△	UPRIGHT DATA	370	4.3×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



M) REFERENCE MACH NUMBER= 1.91

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

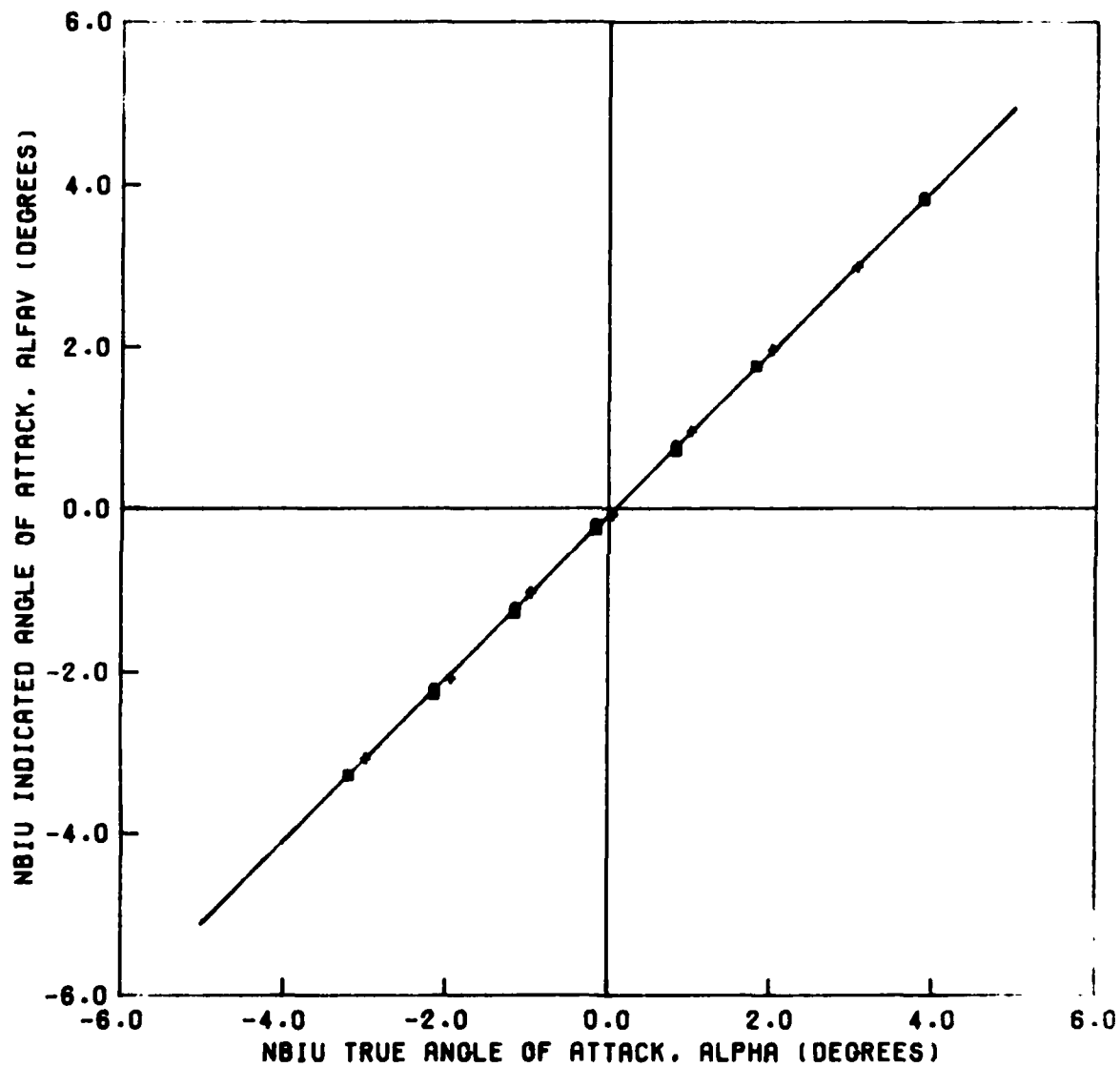
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	321	4.2×10^6
□	UPRIGHT DATA	334	4.2×10^6
○	UPRIGHT DATA	371	4.2×10^6
▲	UPRIGHT DATA	384	4.2×10^6
—	DATA FAIRING		



N) REFERENCE MACH NUMBER= 2.11

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

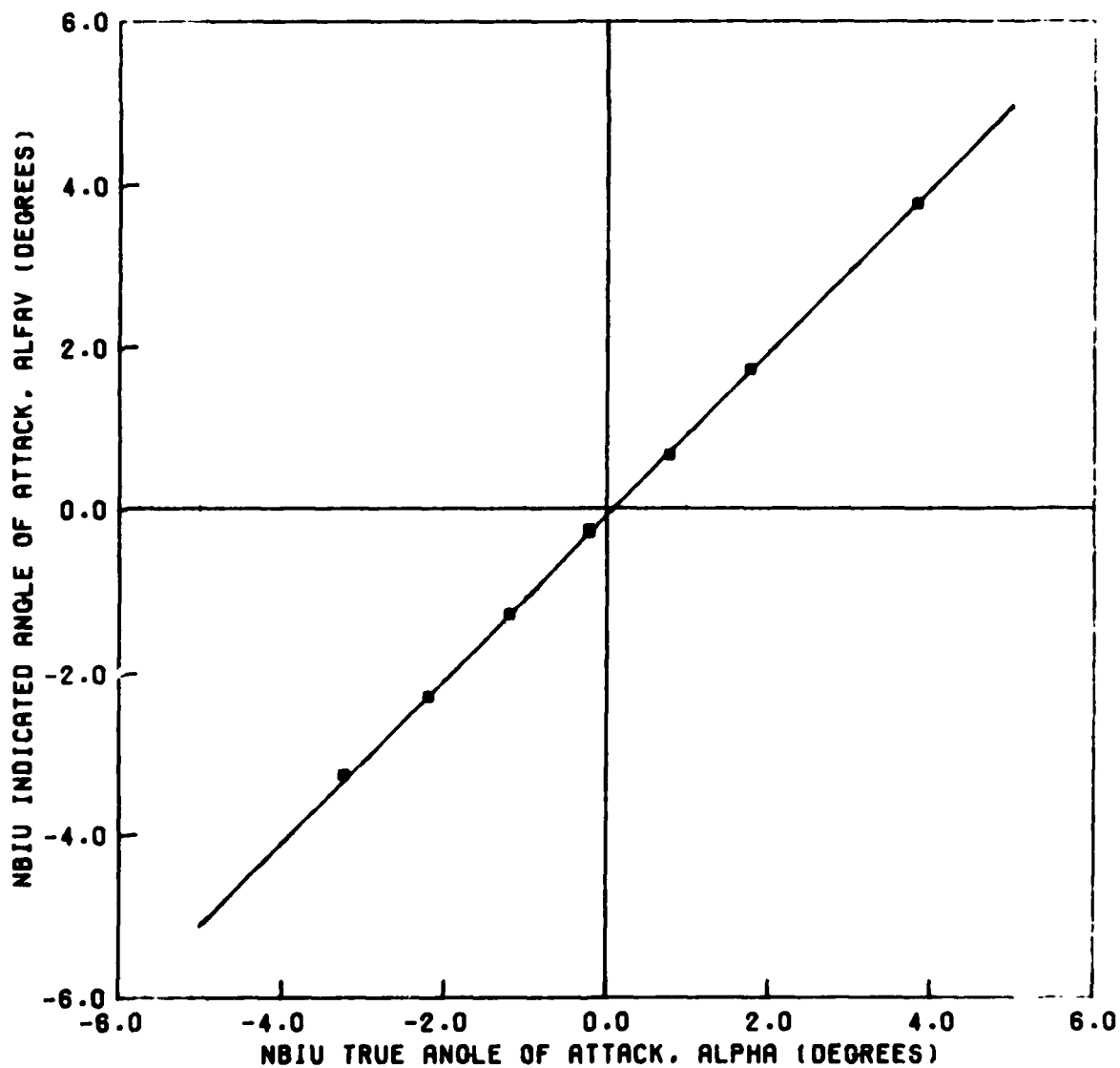
SYMBOL	CONFIOURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	323	4.1×10^6
□	UPRIGHT DATA	336	4.1×10^6
○	UPRIGHT DATA	399	4.1×10^6
—	DATA FAIRING		



0) REFERENCE MACH NUMBER= 2.31

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

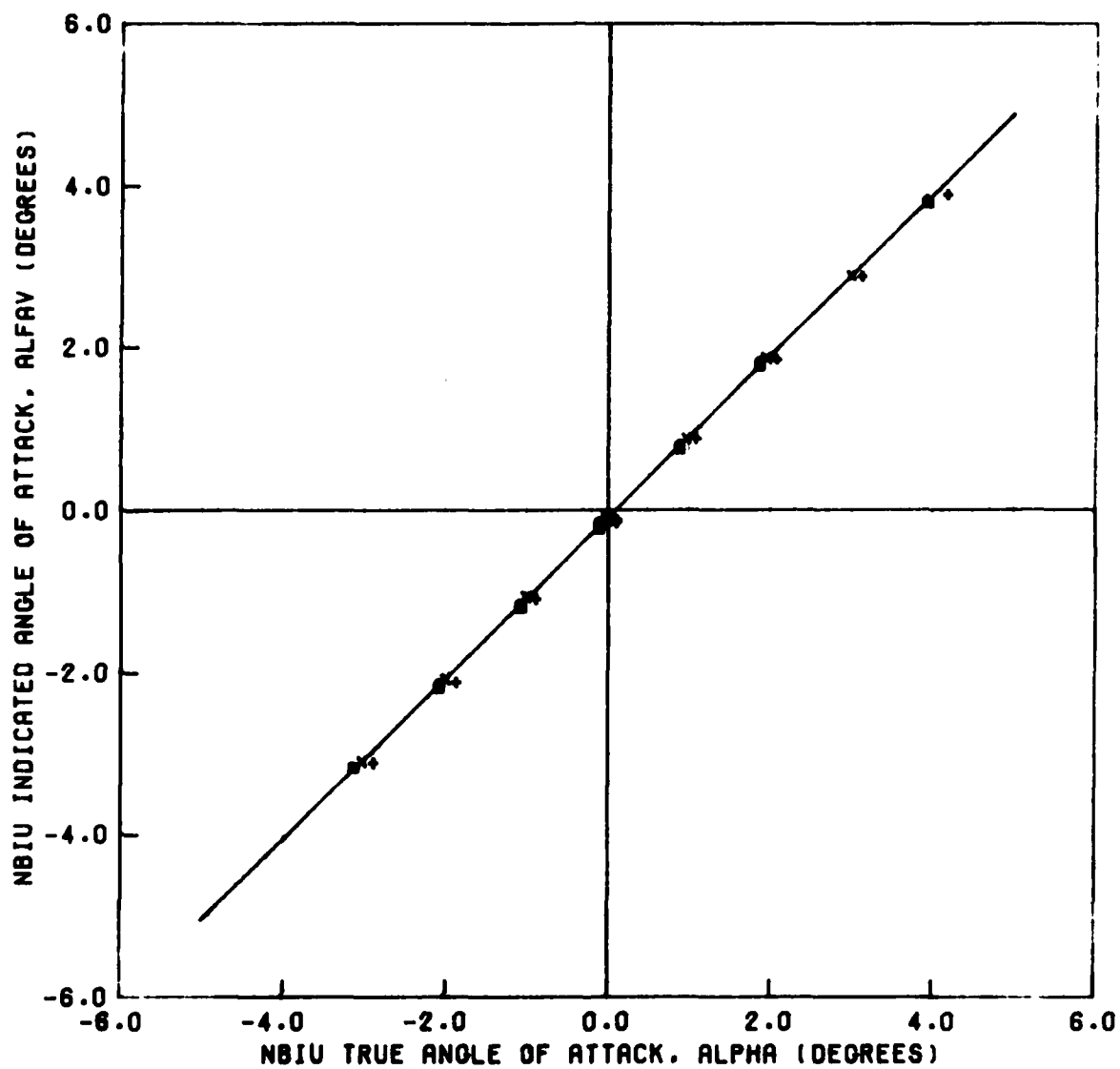
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
\square	UPRIGHT DATA	340	3.7×10^6
—	DATA FAIRING		



P) REFERENCE MACH NUMBER= 2.41

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONTINUED)

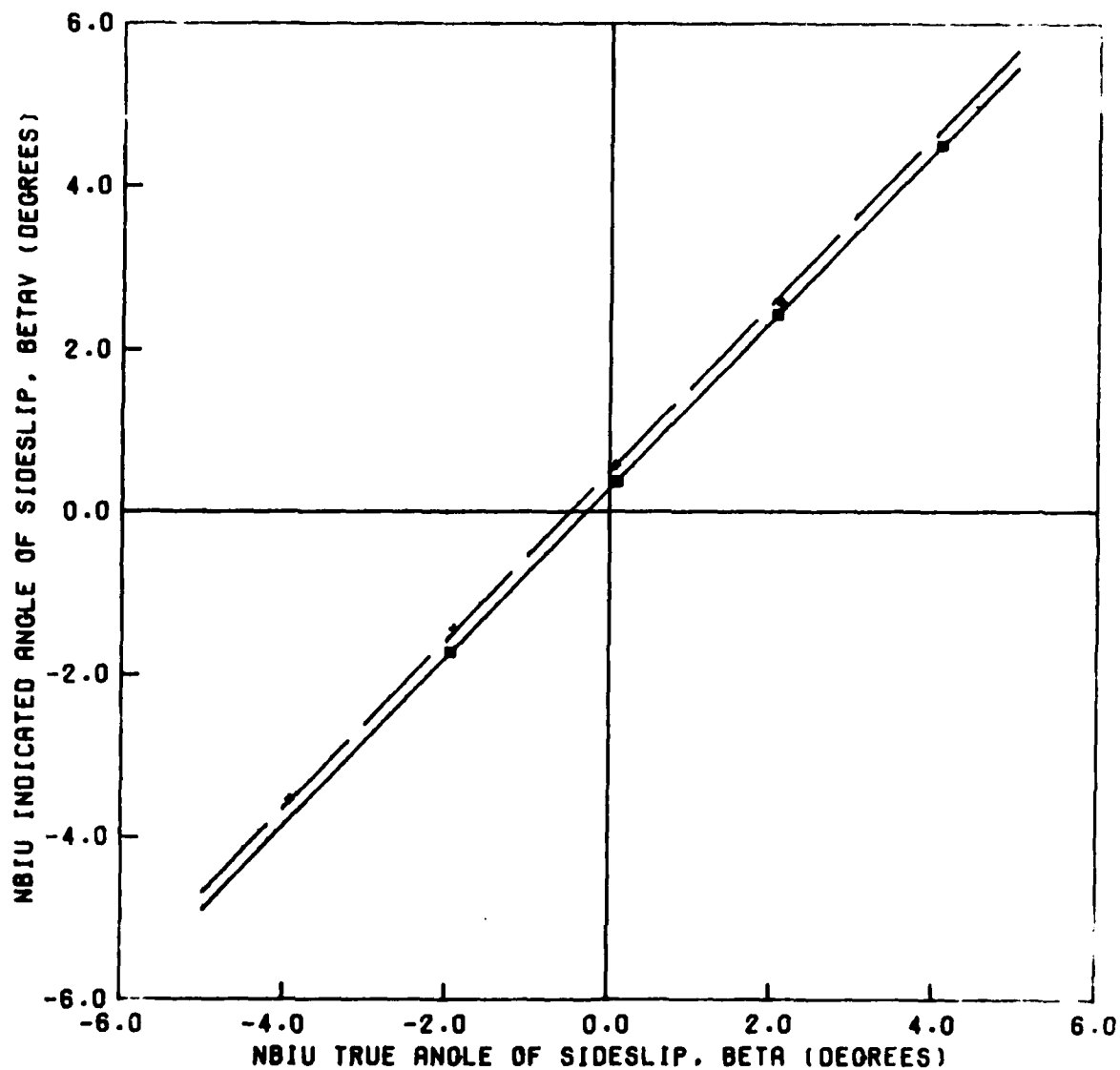
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	316	2.0×10^6
x	INVERTED DATA	325	3.6×10^6
□	UPRIGHT DATA	338	3.6×10^6
○	UPRIGHT DATA	393	3.6×10^6
—	DATA FAIRING		



Q) REFERENCE MACH NUMBER= 2.54

FIGURE A1: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-ATTACK RUNS (CONCLUDED)

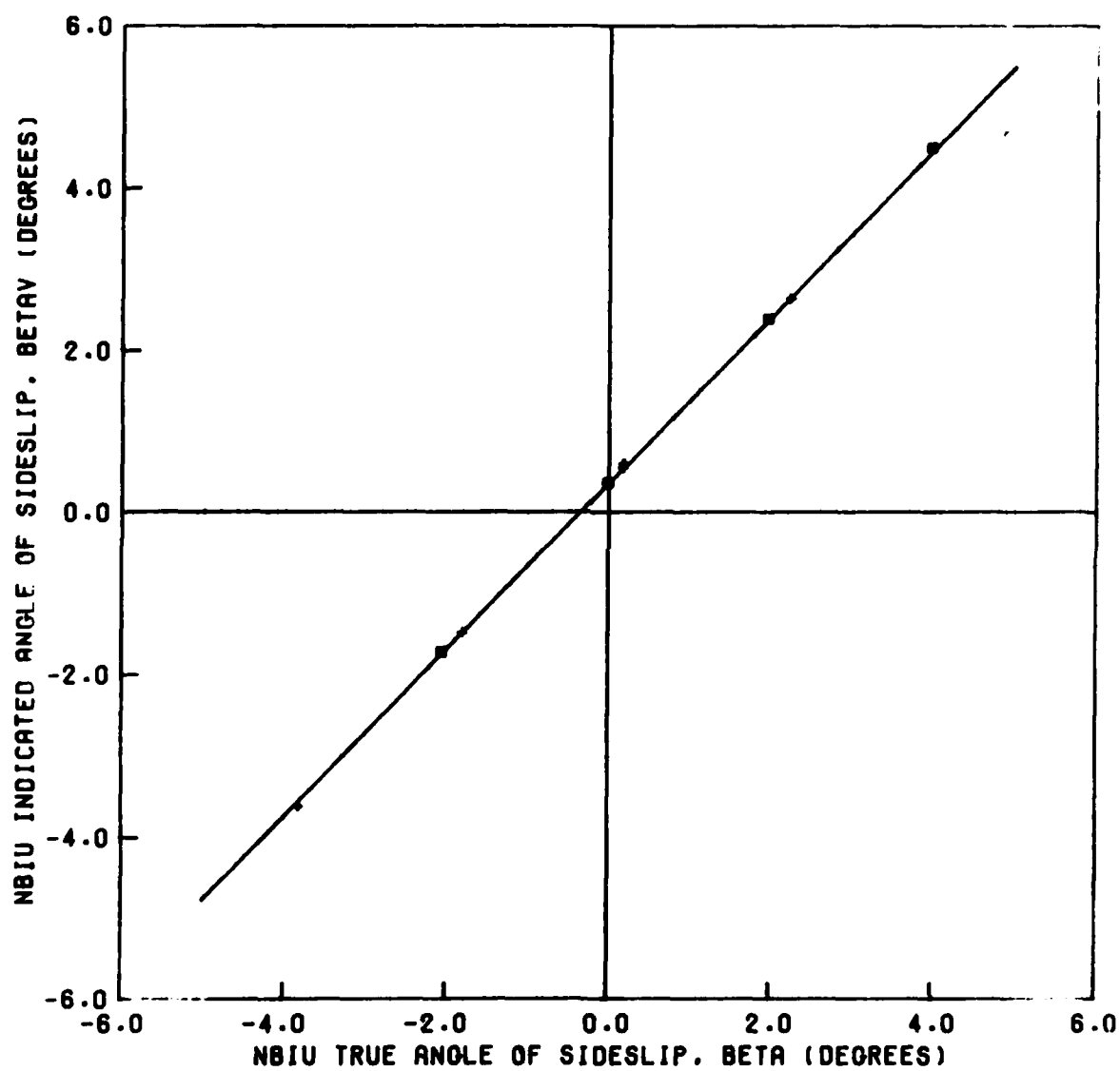
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	46	2.0×10^6
□	UPRIGHT DATA	163	2.0×10^6
- - -	INVERTED FAIRING		
— — —	UPRIGHT FAIRING		



A) REFERENCE MACH NUMBER= 0.40

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS

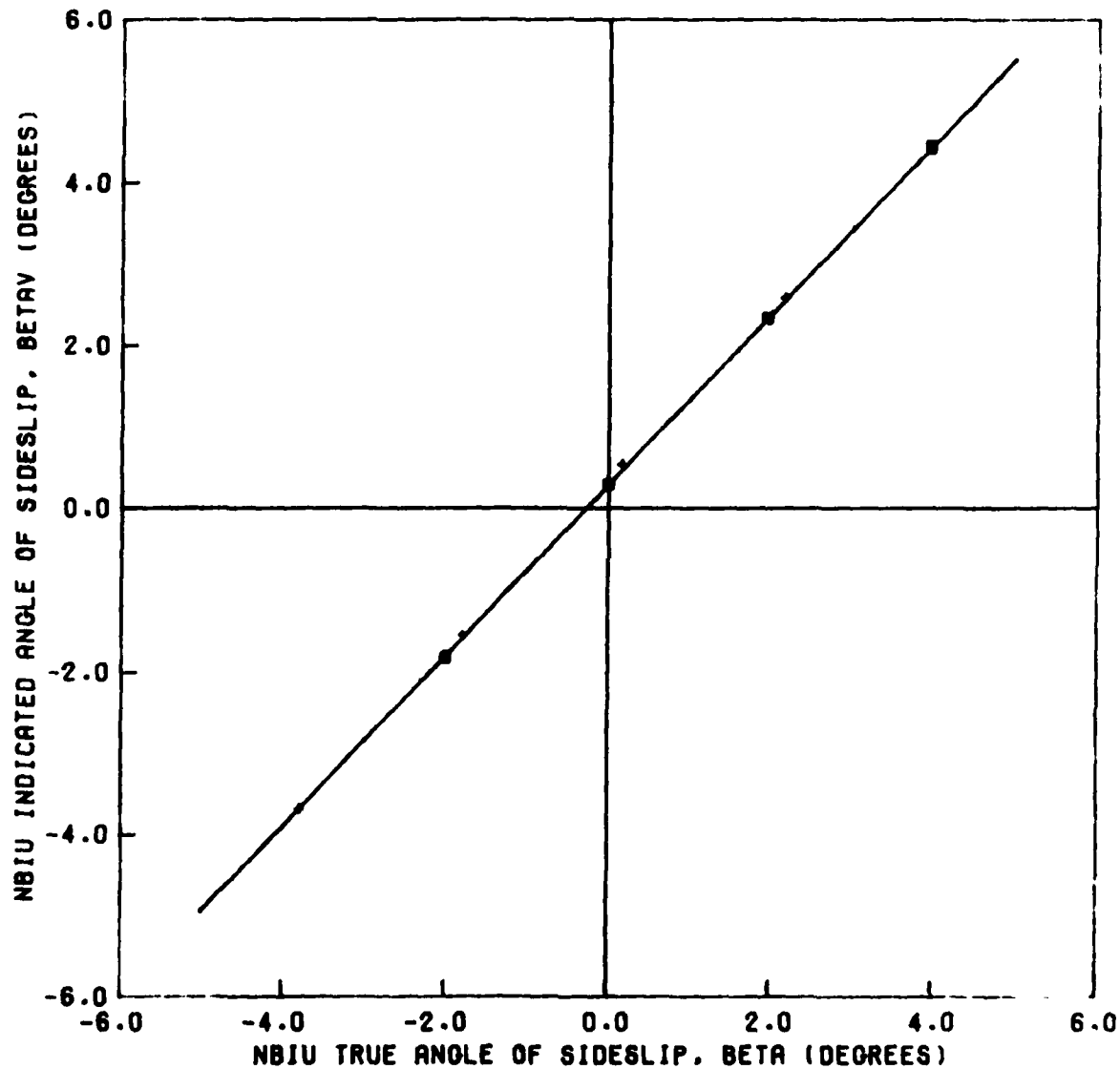
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	27	2.6×10^6
□	UPRIGHT DATA	146	2.6×10^6
—	DATA FAIRING		



B) REFERENCE MACH NUMBER= 0.60

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

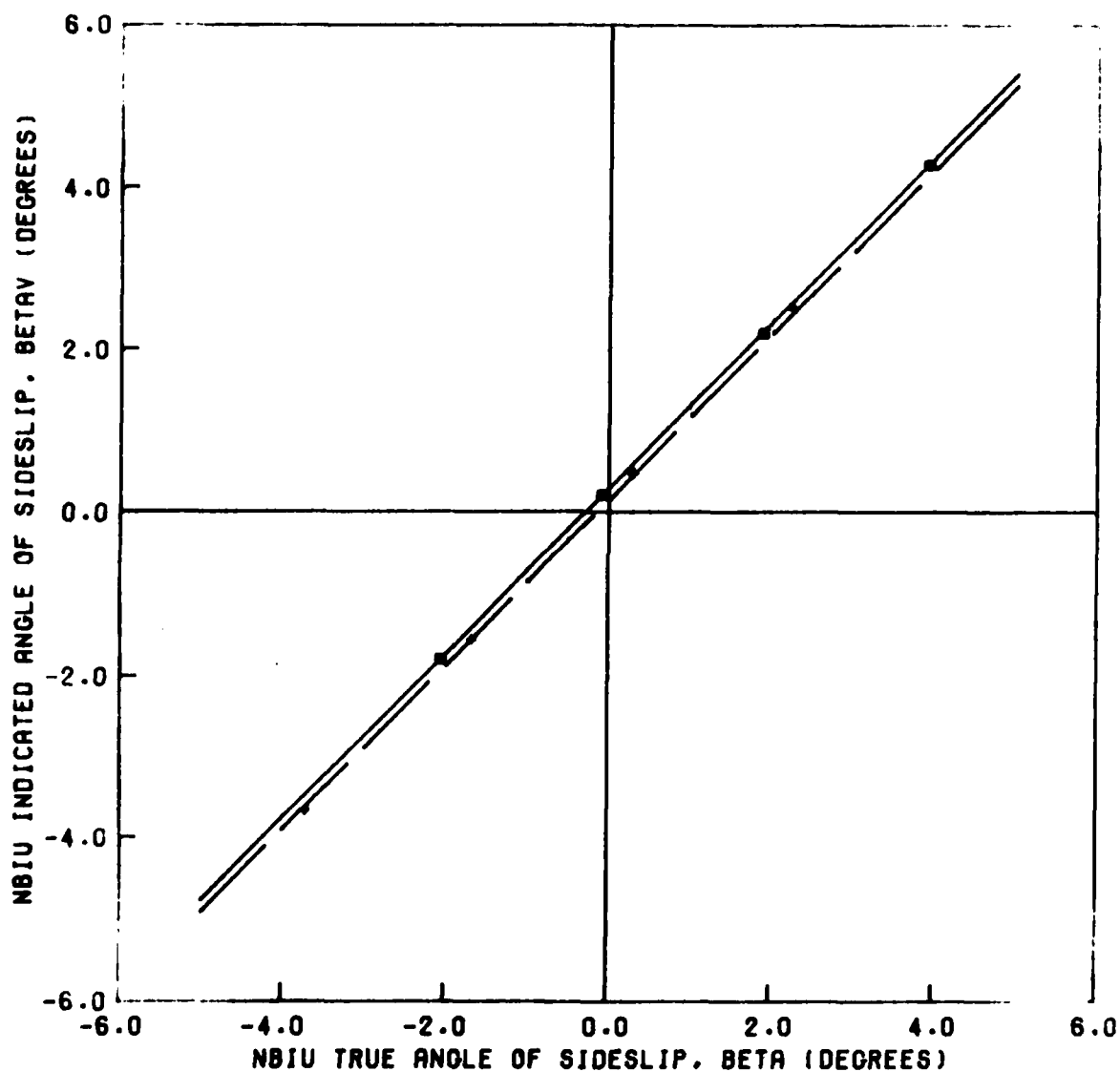
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	29	2.1×10^6
□	UPRIGHT DATA	129	2.1×10^6
○	UPRIGHT DATA	242	2.1×10^6
—	DATA FAIRING		



C) REFERENCE MACH NUMBER= 0.80

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

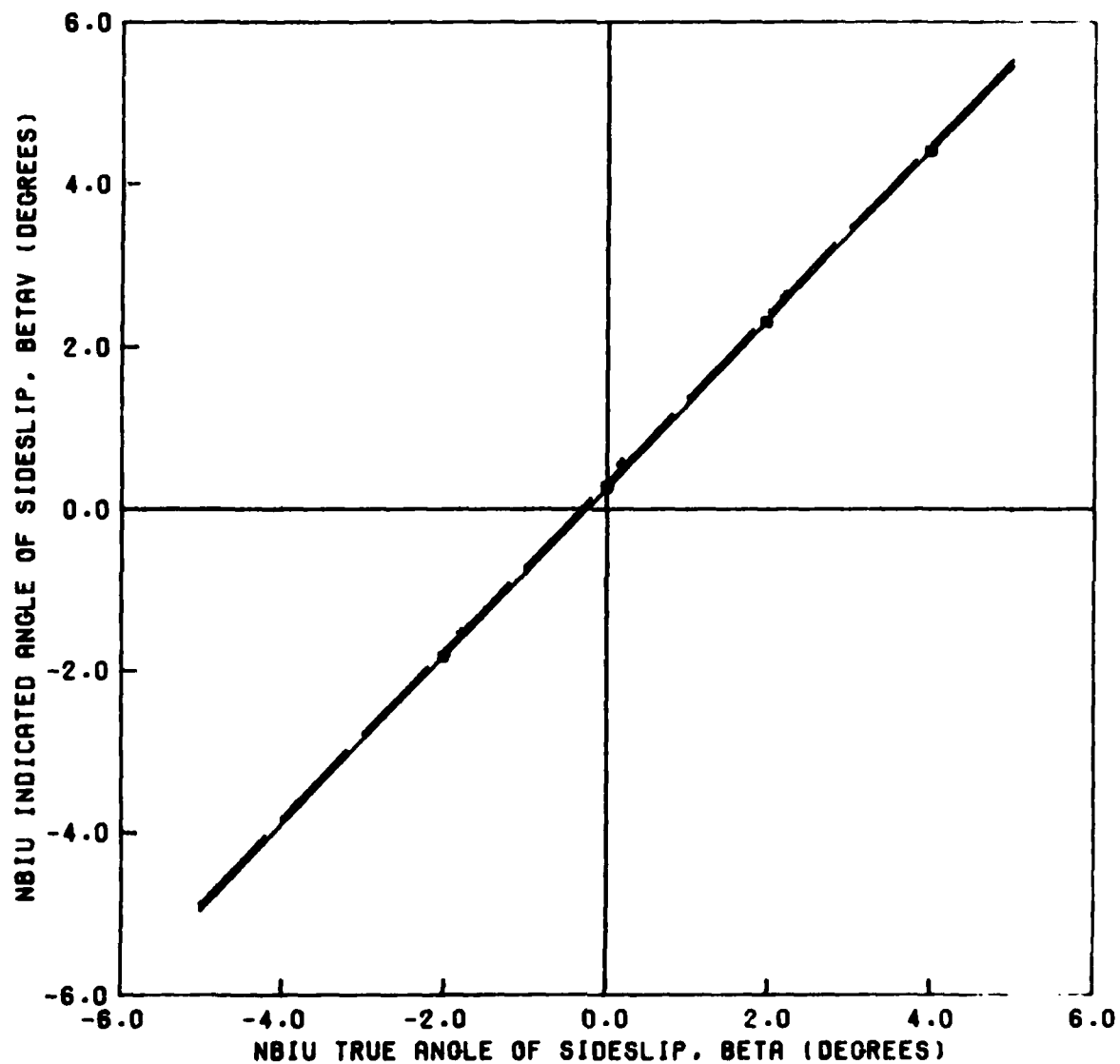
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	31	2.0×10^6
□	UPRIGHT DATA	82	2.0×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



D) REFERENCE MACH NUMBER= 0.90

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

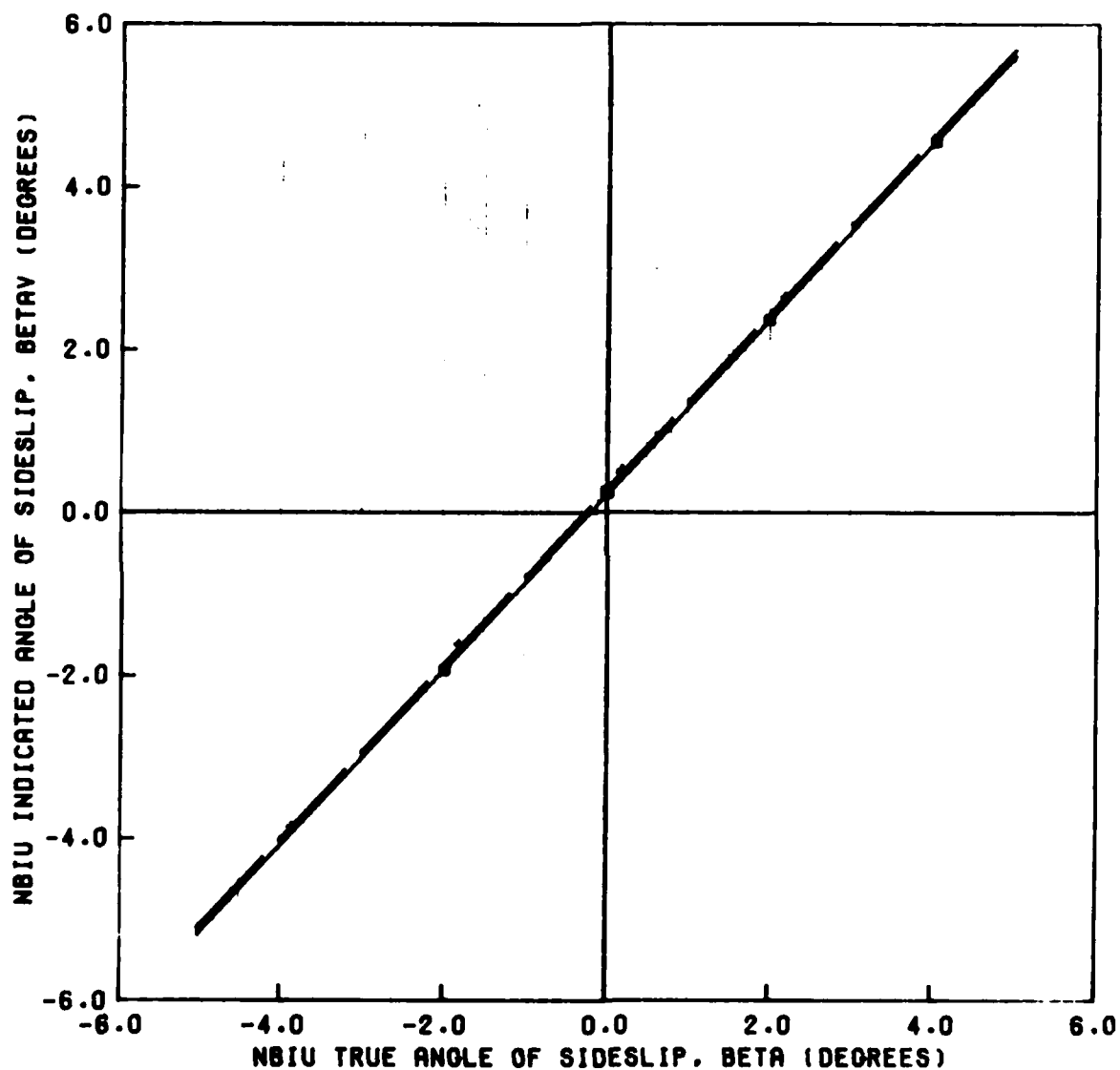
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	33	1.8×10^6
□	UPRIGHT DATA	112	1.8×10^6
○	UPRIGHT DATA	241	1.8×10^6
— —	INVERTED FAIRING		
— —	UPRIGHT FAIRING		



E) REFERENCE MACH NUMBER= 0.95

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

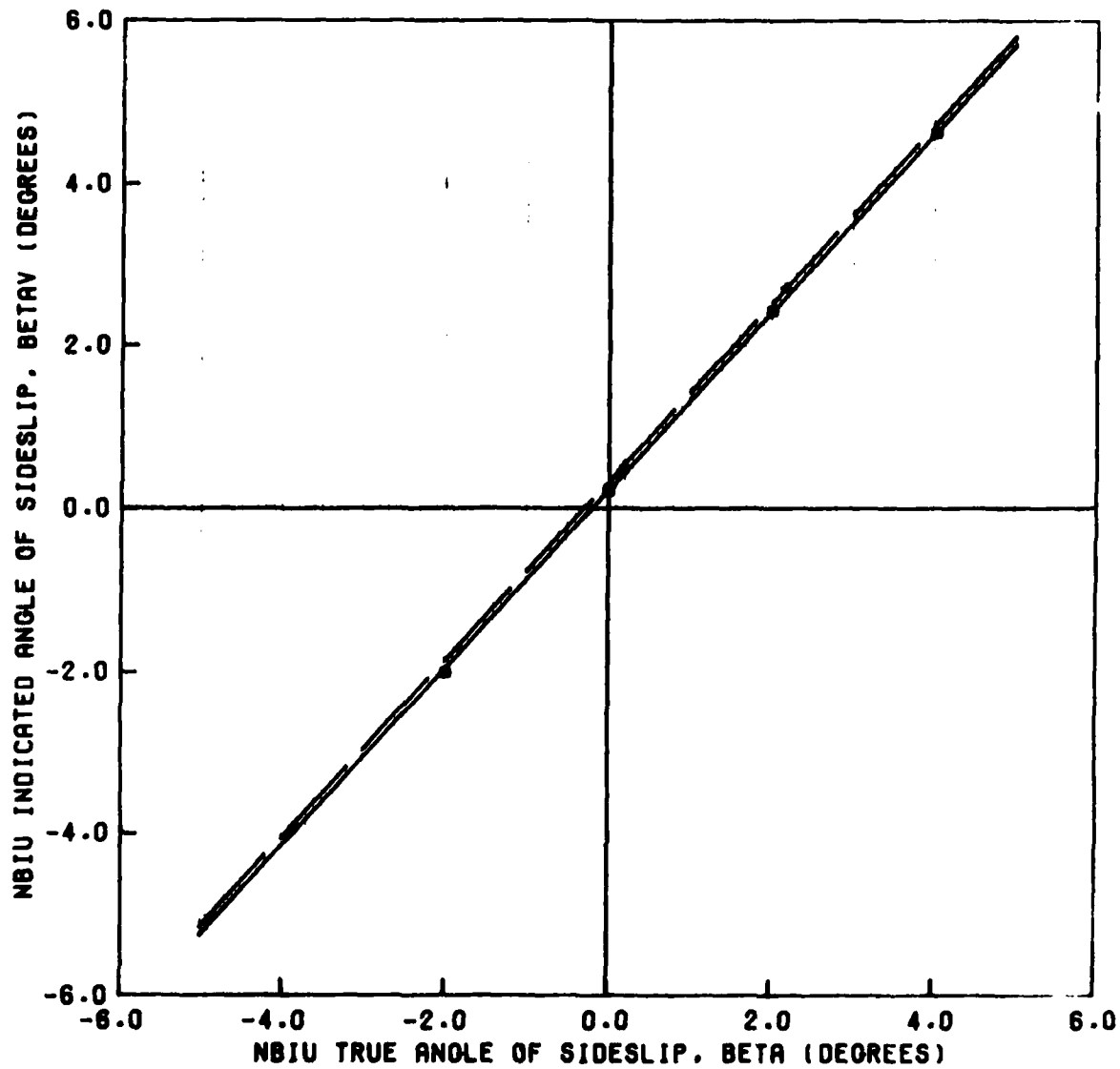
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	35	2.8×10^6
□	UPRIGHT DATA	181	2.8×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



F) REFERENCE MACH NUMBER= 1.05

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

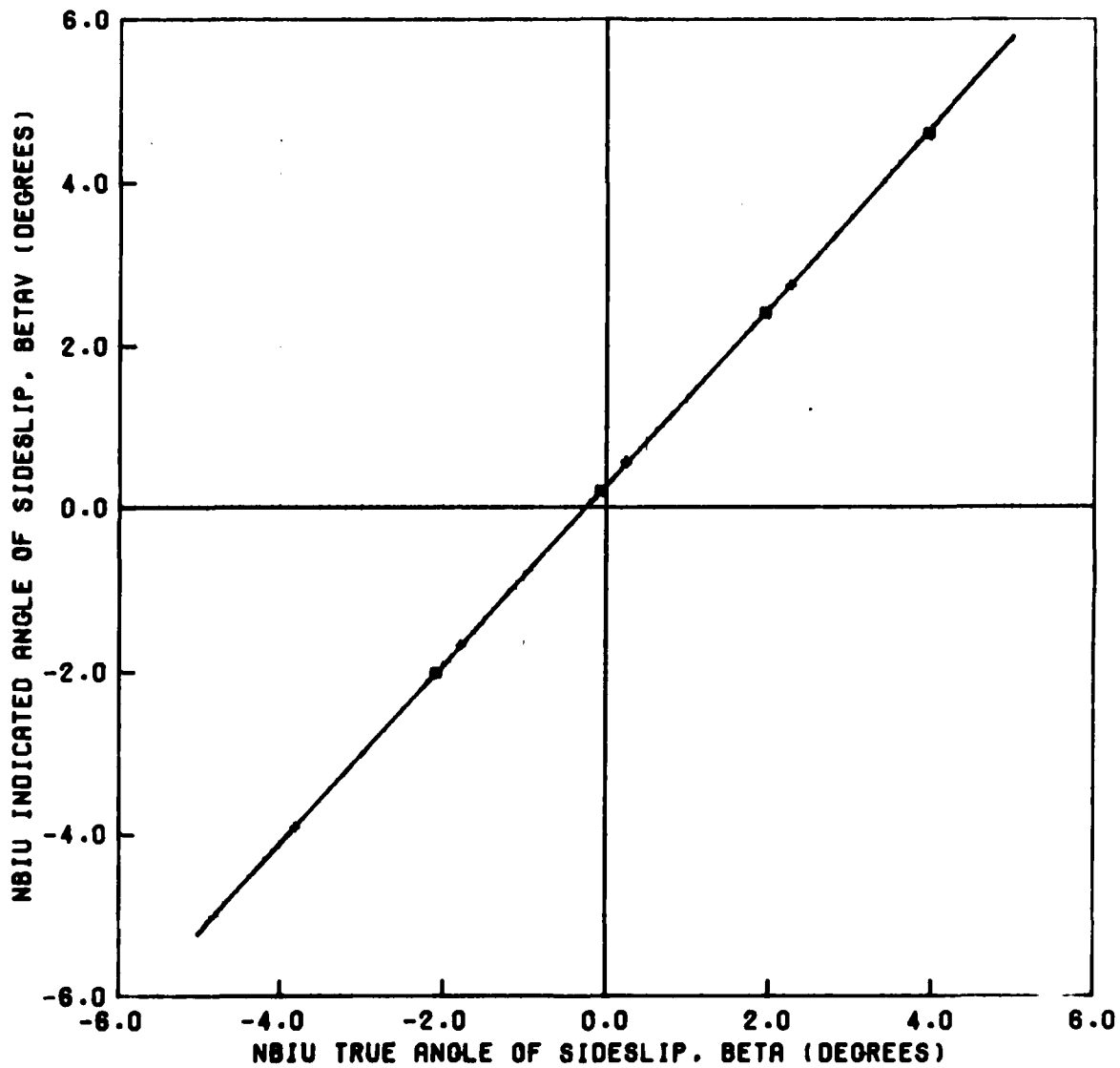
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	37	2.9×10^6
□	UPRIGHT DATA	233	2.9×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



0) REFERENCE MACH NUMBER= 1.10

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

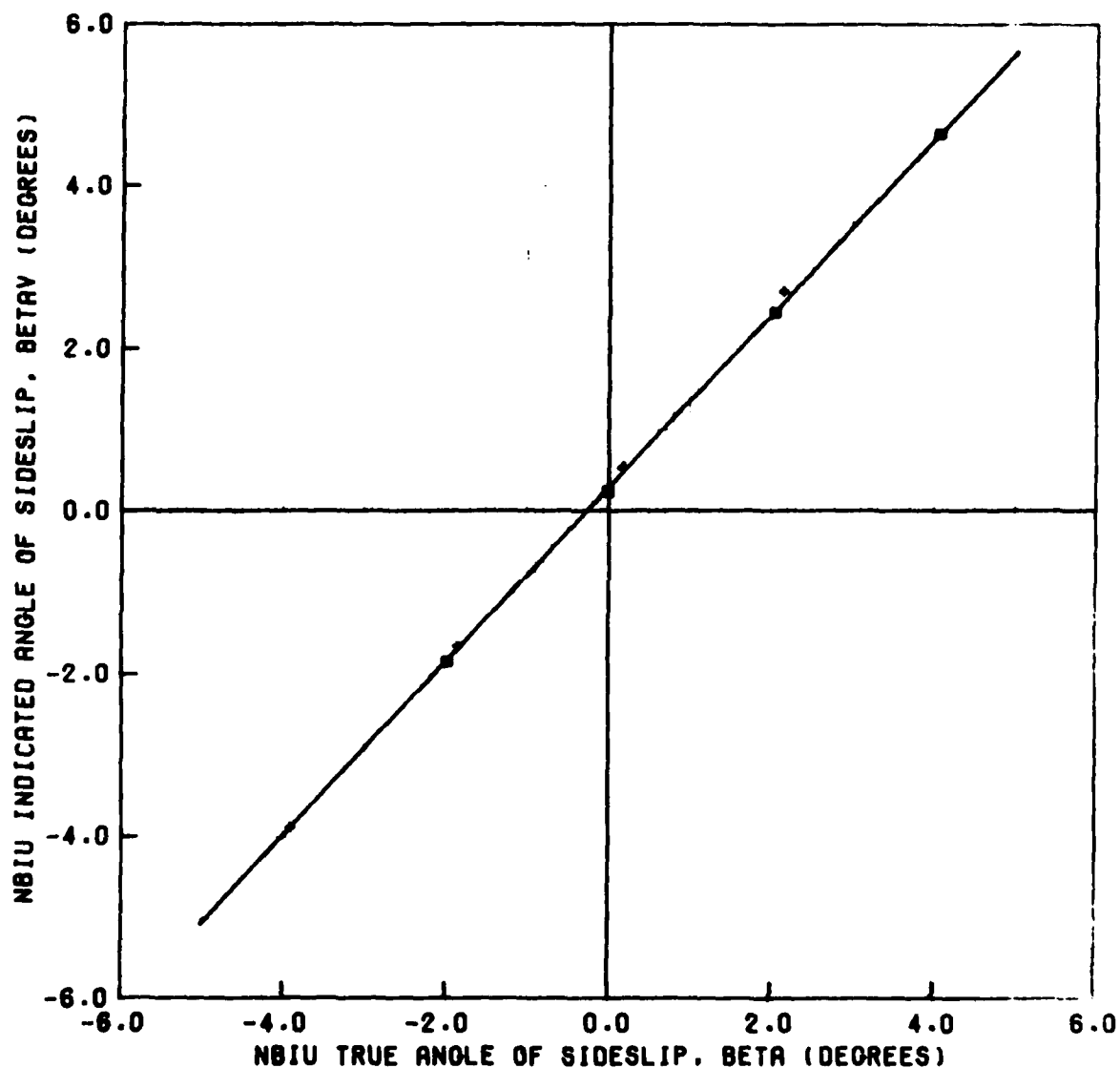
SYMBOL	CONFIOURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	39	3.3×10^6
□	UPRIGHT DATA	216	3.3×10^6
—	DATA FAIRING		



H) REFERENCE MACH NUMBER= 1.20

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

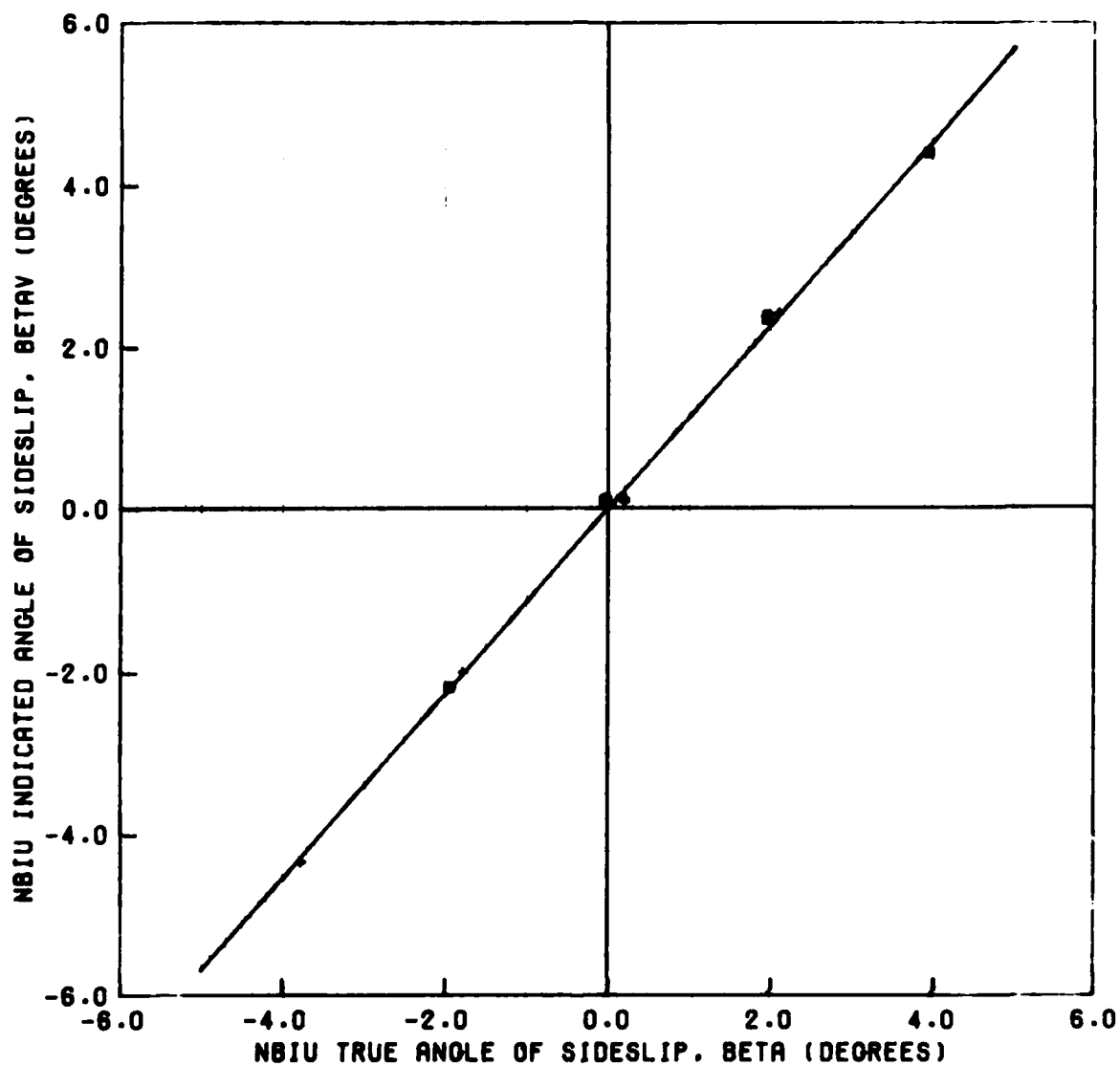
SYMBOL	CONFIOURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	41	3.7×10^6
□	UPRIGHT DATA	198	3.7×10^6
—	DATA FAIRING		



1) REFERENCE MACH NUMBER= 1.30

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

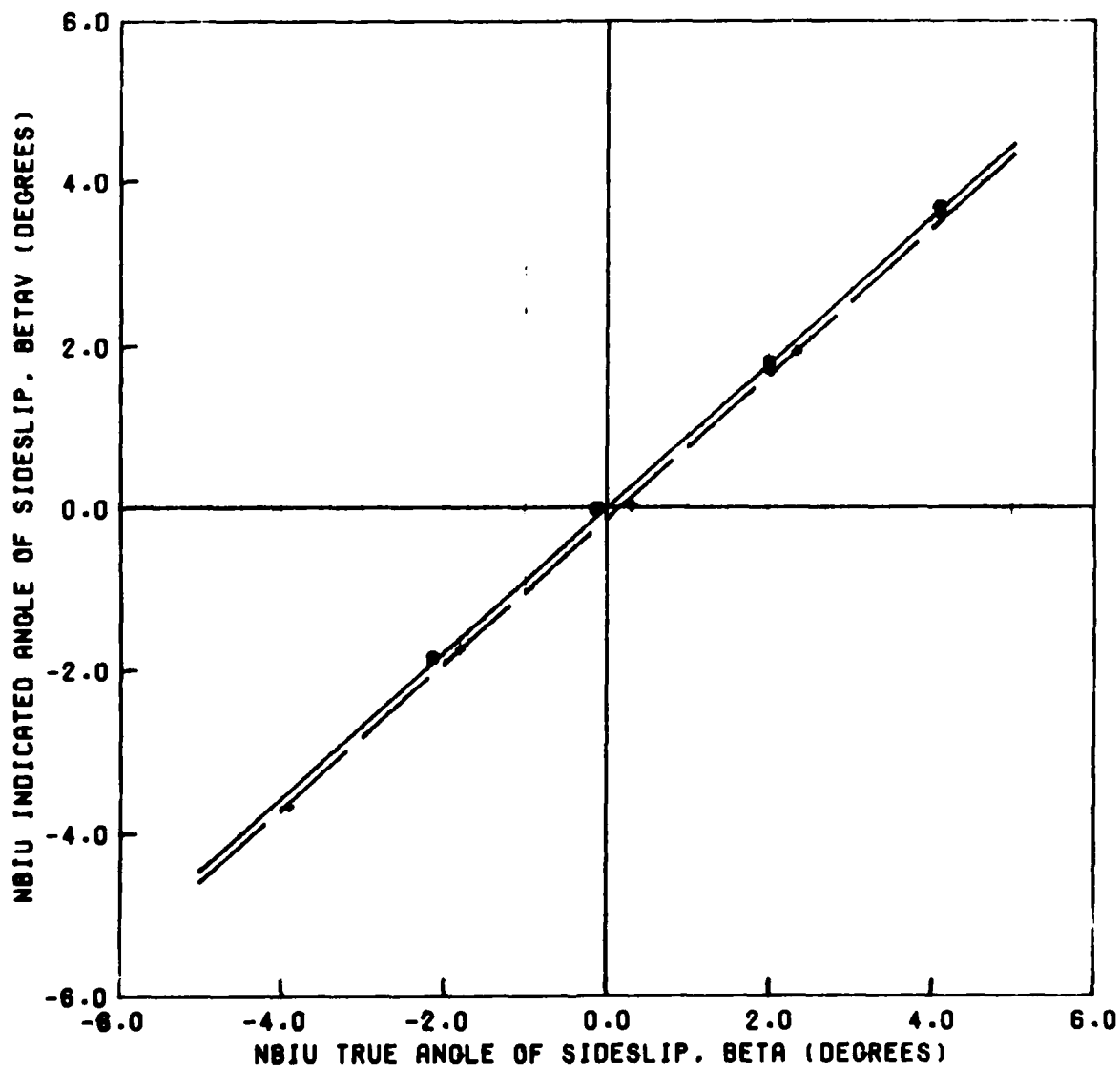
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	320	4.0×10^6
□	UPRIGHT DATA	331	4.0×10^6
○	UPRIGHT DATA	353	4.0×10^6
—	DATA FAIRING		



J) REFERENCE MACH NUMBER= 1.51

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

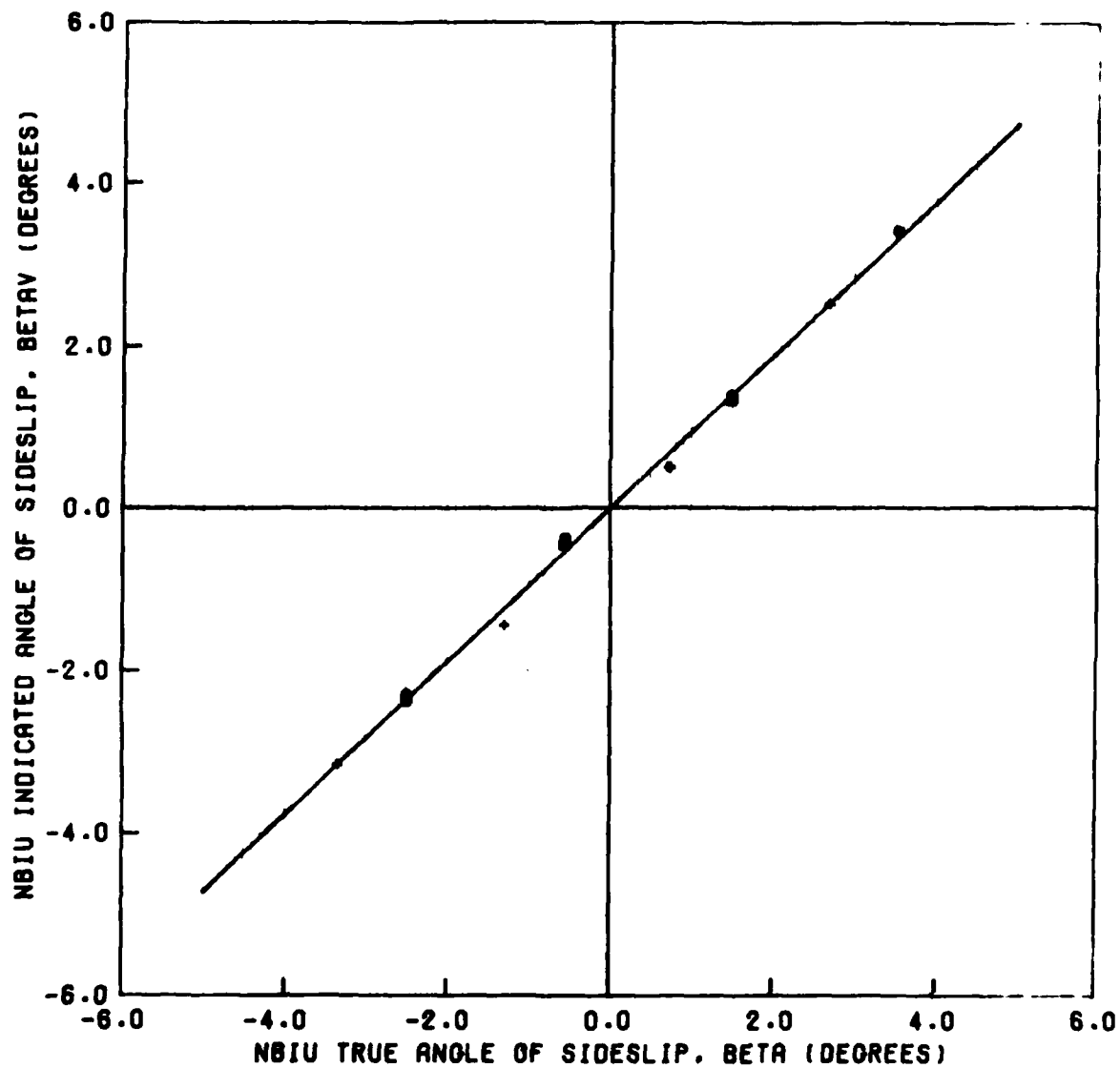
SYMBOL	CONFIGURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	319	4.3×10^6
□	UPRIGHT DATA	333	4.3×10^6
○	UPRIGHT DATA	367	4.3×10^6
---	INVERTED FAIRING		
---	UPRIGHT FAIRING		



K) REFERENCE MACH NUMBER= 1.91

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

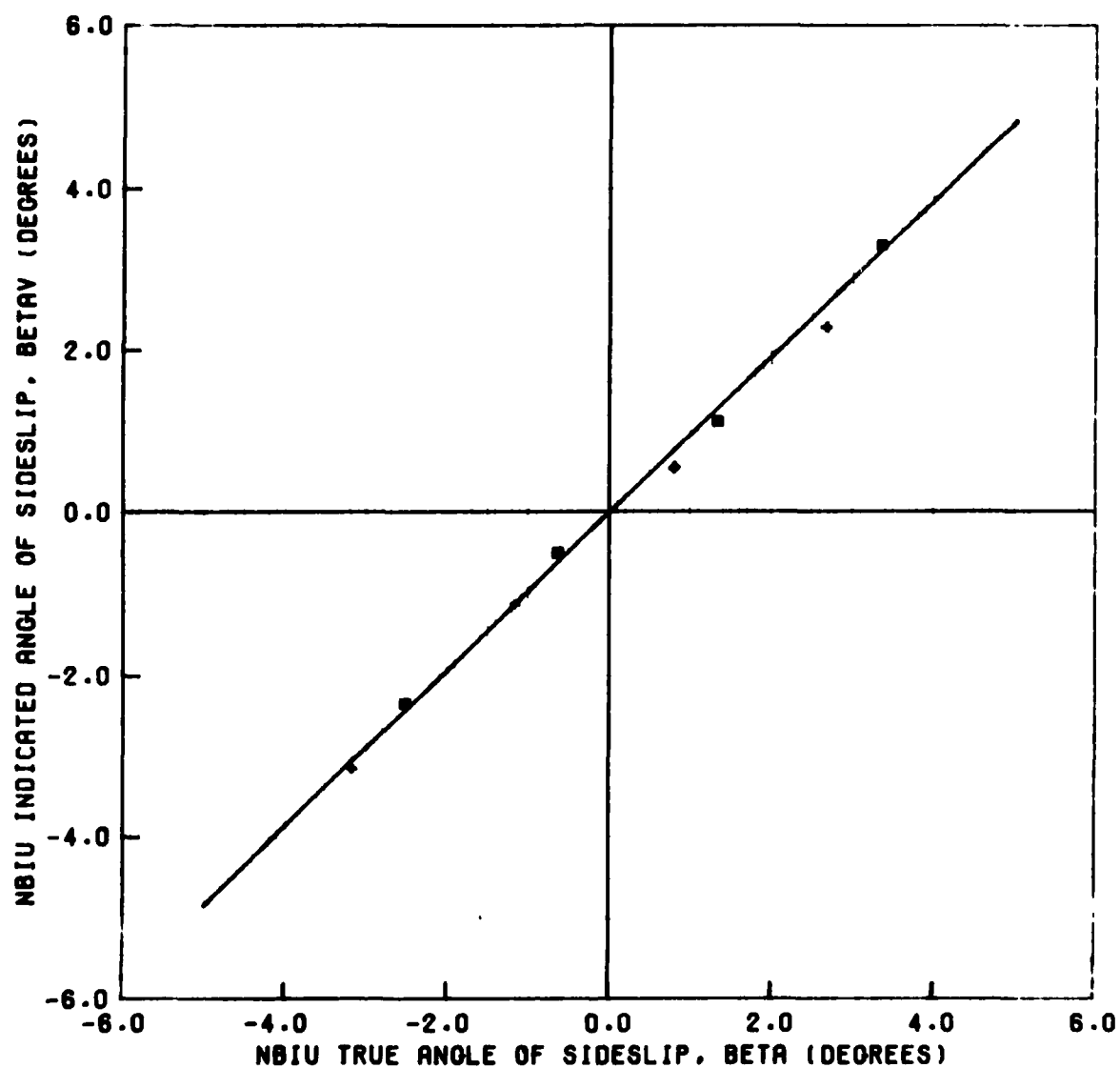
SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	322	4.2×10^6
□	UPRIGHT DATA	335	4.2×10^6
○	UPRIGHT DATA	381	4.2×10^6
—	DATA FAIRING		



L) REFERENCE MACH NUMBER= 2.11

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

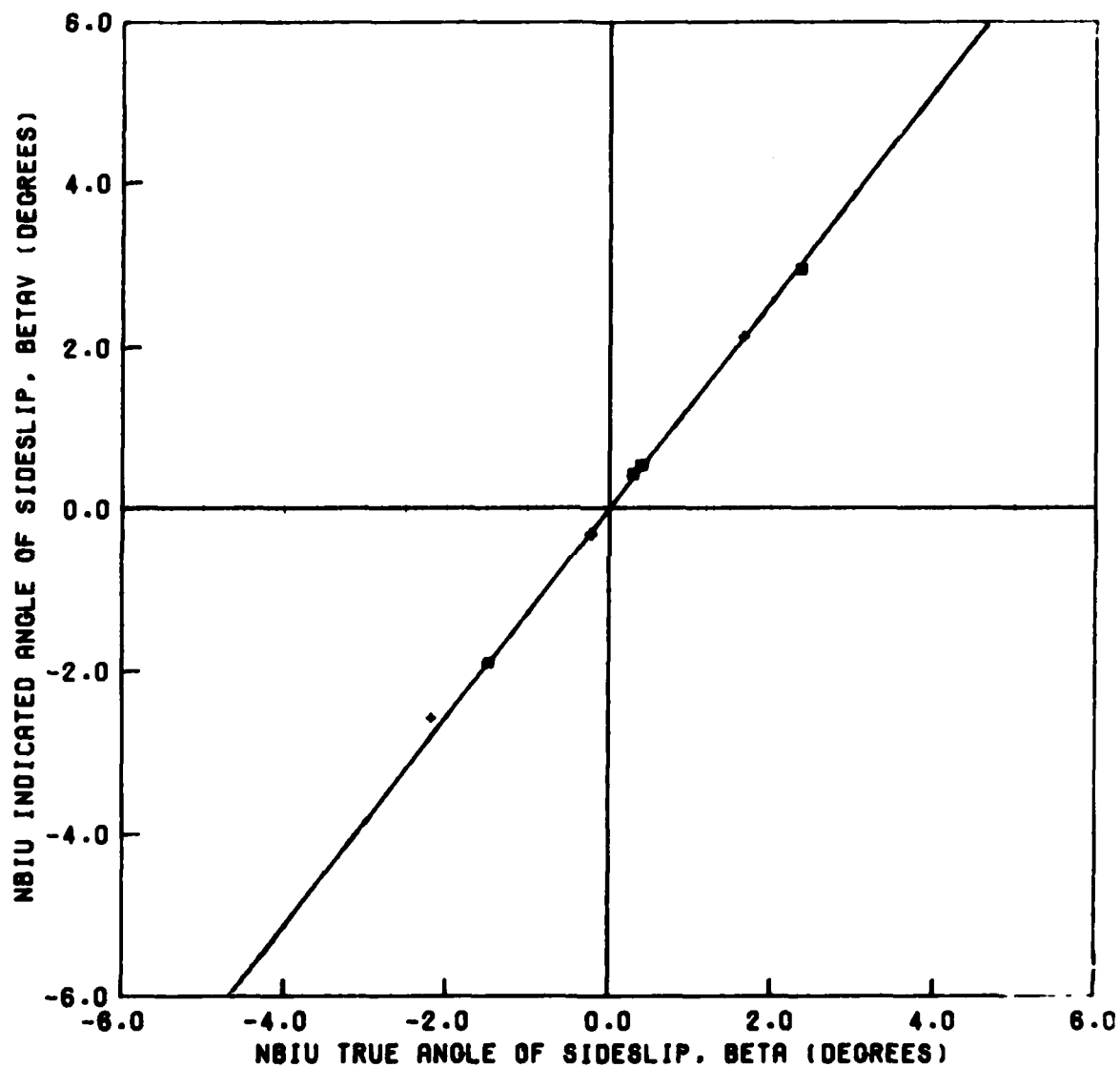
SYMBOL	CONFIOURATION	RUN	R_E/L (/FOOT)
+	INVERTED DATA	324	4.1×10^6
□	UPRIGHT DATA	337	4.1×10^6
—	DATA FAIRING		



M) REFERENCE MACH NUMBER= 2.31

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONTINUED)

SYMBOL	CONFIGURATION	RUN	R_E/L (1/FOOT)
+	INVERTED DATA	326	3.6×10^6
□	UPRIGHT DATA	339	3.6×10^6
—	DATA FAIRING		



N) REFERENCE MACH NUMBER= 2.54

FIGURE A2: FLOW-ANGULARITY DATA FROM ORIGINAL ANGLE-OF-SIDESLIP RUNS (CONCLUDED)

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